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# MICHIGAN FARMER

AND  
**LIVE STOCK**  
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ALL who attended the event united in praise of the Thirteenth International Live Stock Exposition, held at Dexter Park, in Chicago, last week. Unusually favorable December weather promoted a large attendance during the early days of the show and the mild days favored the scattering of the crowd throughout the grounds and the extensive carlot exhibits in the yards, leaving the judging rings and amphitheatre only comfortably filled and giving everybody a much better opportunity to see the show than would have been the case had inclement weather kept a majority of the patrons indoors. The extent of the attendance was better judged at the night shows where not half of the throng who attended could be seated in the immense amphitheatre.

As usual, the chief interest during the early days of the show centered about the judging of the individual fat steer classes during the elimination process, which of necessity preceded the selection of the grand champion fat steer. For the second time in the history of the International this honor went to Canada, and incidentally added another grand championship to the already long list which stand to the credit of the Angus breed. The grand champion steer, illustrated in the accompanying cut, was Glencarnock Victor, a two-year-old grade Angus steer, bred and exhibited by J. D. McGregor, of Glencarnock Farm, near Brandon, Manitoba. This steer weighed 1,630 pounds at a trifle over two years and seven months of age. His sire was Elm Park Ringmaster, a pure-bred Angus bull belonging to Mr. McGregor's herd and his dam was a grade cow that never had a name. Being an exceptionally good calf, displaying the best traits of the breed, he was purchased by Wm. Porterfield, a Manitoba fitter, who exhibited him at the winter fair at Brandon, where he captured the first prize last March. Such were his development and apparent possibilities that Mr. McGregor repurchased the steer and placed him in the hands of his herdsman to be fitted for this year's International.

It is a matter of noteworthy interest that this herdsman, Robert Brown by name, is a brother of John Brown, the herdsman at the Iowa college who fitted the winner of the 1911 championship and the product of whose skill was this year

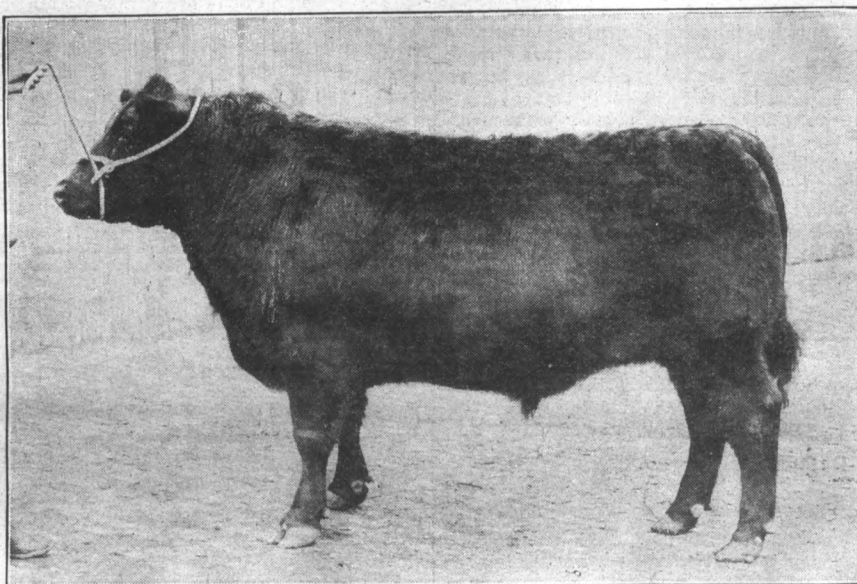
## The Thirteenth International.

a contender for the championship and was made reserve grand champion steer of the show—the Iowa College steer, Black Rock, namesake of an illustrious predecessor.

There are other factors in this victory of the Canadian steer which are worthy of special note, chief among which is the method by which he was grown. He was entirely a product of the northwest, where corn is not grown, never having

the state, but it is clearly demonstrated that their absence is not a handicap which the skillful feeder cannot overcome.

As the illustration shows, the grand champion fat steer was an animal of wonderful quality and finish. Competition in the auction ring was strong for his possession and he was sold after spirited bidding at 50 cents per pound to a local department store. His principal



Glencarnock Victor, Grand Champion Fat Steer at the Thirteenth International.

had a pound of this grain during his life. Neither was he ever fed any of the so-called concentrates, his sole diet being grass, hay, oats and barley. This is not only a tribute to the skill of the feeder but in a measure upsets the theory that corn is essential to the attainment of a high finish or that silage is absolutely necessary to the attainment of rapid growth. Unquestionably these are valuable factors which add to the profit of those who are more fortunately located, as in Michigan, for silage can be profitably produced in practically all parts of

competitors for grand championship honors were "Black Rock," the Iowa candidate above mentioned, and Prather's Prime Knight, a Shorthorn calf exhibited by J. F. Prather, of Illinois, awarded the championship in this breed, and regarded as a strong contestant for the big honor of the show as he went up the line. The fat steer classes were particularly strong all along the line, and the work of Robt. Keene, the London judge, received general approval.

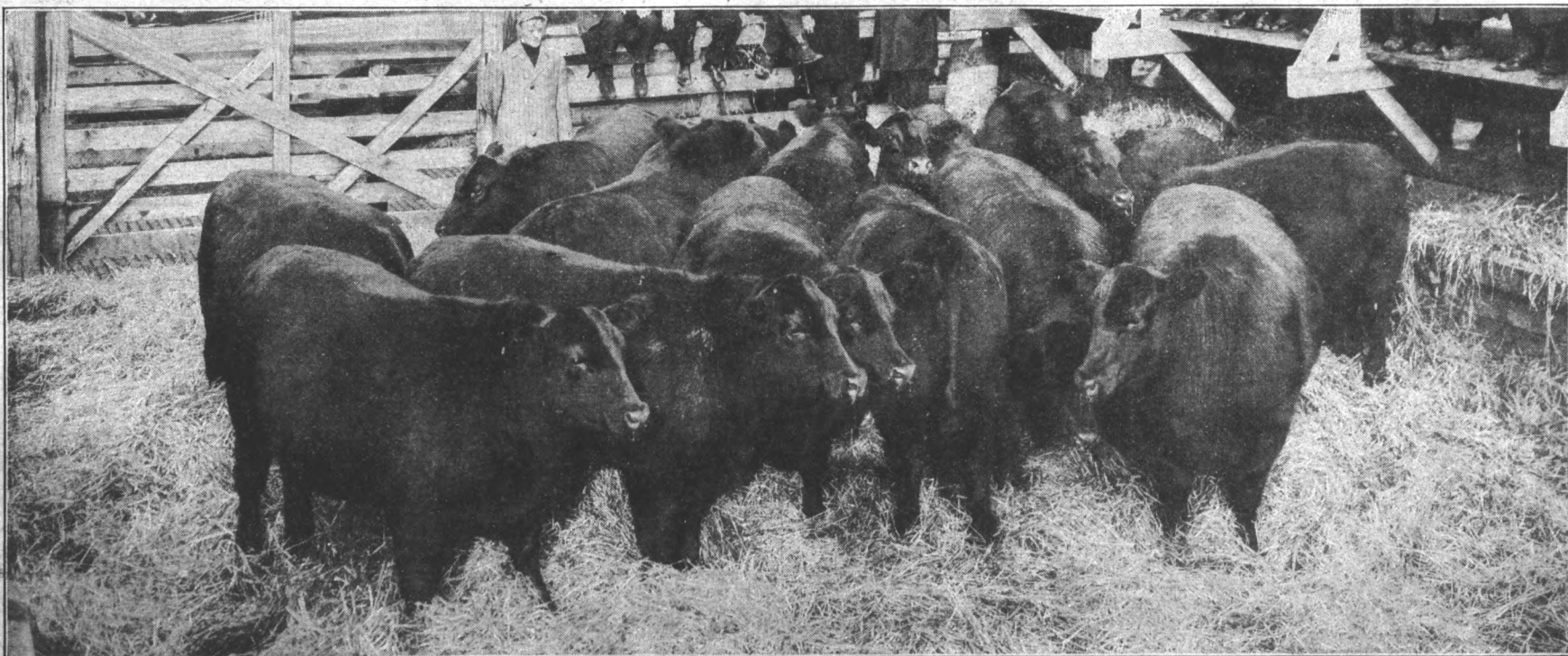
The interest in the carlot fat classes was keen as usual and, as the prelim-

inary judging in the elimination process progressed, it became the almost unanimous opinion that baby beef would again be demonstrated as superior in quality through the winning of the grand championship by some one of the contestants in the yearling carlot classes. This prediction was finally verified in the selection of a load of superb Angus yearlings, exhibited by Edward P. Hall, of Mechanicsburg, Ill., who also won the grand championship in the 1910 carlot show with another lot of Angus yearlings. These yearlings were declared by the judges to be as fine a load of baby beef as were ever exhibited in a show ring. Their chief competitors for this grand prize were a load of two-year-old Angus steers, winners of the two-year-old championship and made reserve grand champion carload of the show, exhibited by W. C. White, of Missouri, and the three-year-old Herefords fed by Notre Dame University, of Indiana, which were champions in the three-year-old class.

The individuals from this exhibit were picked from a herd of 45 head of Angus yearlings fed by Mr. Hall this year. It is notable that while the Grand Champions were carefully handled during the entire feeding period they are a product of the open feed lot, never having had shelter. Mr. Hall purchased the calves late in October, 1911, immediately putting them on a feed of corn, oats and bluegrass pasture, the pasture being substituted by hay and shocked fodder as roughage later in the season. In March the corn grain ration was supplemented by a light feed of cottonseed meal, gradually increased until they were given two pounds per day, together with all the corn they would eat. In addition, two pounds of molasses was added to the ration in September. The total of winnings of this carlot exhibit was \$855 and they sold in the auction ring at \$14 per cwt. They averaged 1,189 pounds in weight.

The sweepstakes winners in the carlot hog classes were Berkshires, shown by George N. Runkle, of Industry, Ill. A notable feature of this exhibit was the fact that it was comprised of survivors of a drove of swine that had passed through two sieges of hog cholera. This exhibit consisted of 50 Berkshires, averaging 424 pounds in weight.

(Continued on page 537).



Grand Champion Carlot of Fat Steers at the 1912 International. A Grand Lot of Angus Yearlings and a Living Testimonial to the Superiority of Baby Beef.



## THE VALUE OF STRAW.

One of the principal profits for the farmer in raising small grain is the straw. Years ago, when it seemed quite impossible to deplete the virgin soil by continued abuse of cropping year after year and putting nothing back to retain its maximum fertility, farmers used to make no account of straw, and to get rid of it millions of tons of straw were burned, especially in the western states. Not many years ago, in Illinois, the large paper mills consumed all the surplus straw, and used to buy it of the farmers by the ton or stack. The mills of course made the price so low that it did not make much financial gain to the farmer.

But now times have changed and the farmer, through his careless method of keeping up his soil fertility, is obliged to buy tons of expensive commercial fertilizer, aside from utilizing all the straw he produces, in order to make his land produce anywhere near a standard crop. Two years ago after I finished threshing I had four good sized stacks of straw and, with some old bottoms that were left over from the year before, it looked impossible to use all this straw, and as there were many who wanted a few loads I let over 40 loads go off the place at \$1.50 to \$2.00 per load.

When I was in the Union Stock Yards at Chicago last spring I inspected a fertilizer plant there and it set me to thinking why it would not pay every farmer who produces straw and feeds most of his grain out on his farm to have his own fertilizer plant on his own farm, which would supply his wants materially. This company gathers up the manure made in the yards, dries it and grinds the same as fine as can be, bags it up and sells it to the farmers for \$1.50 per sack of 100 pounds. The joke of it is the farmer is paying for this stuff twice. In the first place it is made from hay for which the farmer pays the exorbitant price of about \$40 per ton and corn that costs around \$2.00 per bushel that the stock yards company feeds our stock while they remain in the yards. Of course, this is a game that we can't beat but when it comes to buying manure at \$30 per ton and paying for the delivery of same, they can count me out of such a game. Now, if it pays those who buy this fertilizer, and it must pay as the company told me they could not make it fast enough for the demand, I am sure it will pay to go at it in a business way and make every load or ton of barnyard manure possible.

## Bed Down Yards as Well as Stables.

Instead of my letting any straw go off my farm I am going to bed my feeding yards down. This fall before the cattle were placed in the yards I bedded them down, also the basement cattle barn, 40x80 ft., over two feet deep and just recently I did the same thing over again. I had thought some of making a cistern outside of the yard to catch the liquid manure that leaches away. But instead of going to this expense I will dump in straw often enough to absorb all the water and this will make much better fertilizer than the liquid. It is amazing how a drove of cattle will trample straw down. You can put it several feet deep in the yards and in a short time it seems to be all gone. But it should be replaced and the whole surface of the feeding yards kept dry with new straw. I want to make an even 1,000 mammoth spreader loads of manure every year to haul out on this farm, and I am going to do it. This will add more than that many dollars to the receipts each year, aside from adding to the value of the land year by year. It may look to some like a long, tedious task to haul out this much manure every season. It is true it would be if the old methods were employed by hauling a few wheelbarrow loads on a wagon at a time and forking the same off in piles in the field, then throwing away a lot more good time by spreading it. Three men and four good horses and two large-sized spreaders will haul 1,000 loads or over 100,000 bushels of manure in less than 30 days to nearby fields or an expense that will not exceed \$150. This will well cover 100 to 125 acres.

## Keep the Straw on the Farm.

No matter whether a farmer keeps dairy cows, feeds cattle, sheep or hogs, if the yards in which they run are kept well bedded down with straw it will make a larger quantity of manure every season. It is safe to say that the farmers who cater to this method of farming will have a farm in the end, as well as a pocket full of money. But the man who sells his hay, grain and, last, but not least, his straw from his land, will have no "farm" or money either. Moral,

make the most of your own fertilizer plants; they are inexpensive and very profitable.

Washtenaw Co. B. F. WASHBURN.

## IMPROVED VARIETIES OF TIMOTHY.

While timothy is the typical hay plant of the United States and its hay is usually used in comparison with different forage plants, it is a strange fact, but true nevertheless, that little or no attention has been given to its improvement or to the possibility of the development of improved varieties.

When the farmer wants to grow corn he has his favorite variety; if he intends to set out an apple orchard he may select the Baldwin or the Winesap or the kind best suited to his farming conditions; if he grows wheat or cotton or rice or cowpeas, seed of some particular and special sort is secured, but when he buys timothy for planting he buys simply timothy seed and not any special variety of known origin and value.

On this point, Prof. H. J. Webber, of the Cornell Experiment Station, where experiments looking toward the improvement of timothy were begun as far back as 1903, says:

"If we ask for selected timothy seed, what we get is simply seed that has been specially cleaned and winnowed or is from a particularly well-cured crop. It is clear that such procedure is contrary to the well-known principles of agriculture, and if we desire to secure the best possible crops of hay we must plant improved varieties adapted to our conditions."

"It is clear that the most important problem before hay growers today is to secure improved varieties that are known to be adapted to local conditions and fitted to give the best quality and yields of hay under such conditions. Not until good varieties adapted to various regions have been secured can we expect any very general improvement and increase in the hay crop of the country."

In beginning the experiments at the Cornell Station, timothy seed was obtained from 163 different places in the United States, and 60 places in foreign countries. Over 17,000 individual plants were grown from this seed and these have formed the basis for study of variations and selection of improved types. Aside from increasing the yield it has been found possible to secure other important improvements, such as resistance to rust. The best of the new varieties are in large measure resistant to rust. It is also important in the timothy industry to have varieties ripening at different seasons, and early, medium, and late sorts have been produced. In ordinary timothy, when the proper stage for cutting is reached, many of the leaves are usually more or less dried out. Green-leaved types have been secured, on which the leaves remain green and fresh until the seeds have matured fully. Hay from such sorts is of superior quality. The varieties of commercial value produced in the course of the experiments at the Cornell Station are being propagated as rapidly as possible in order to obtain seed for distribution.

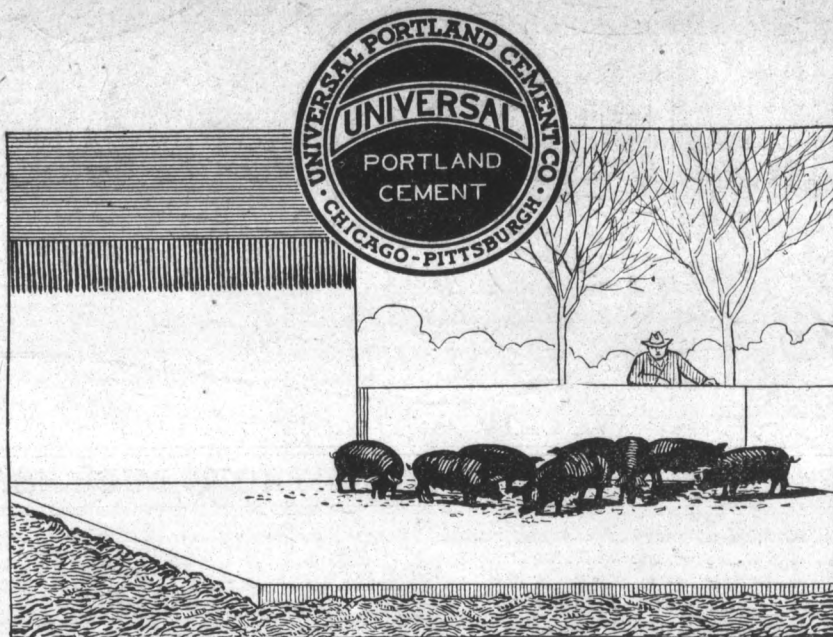
Experts are of the opinion that while the value of the hay crop may no doubt be greatly increased by the use of improved varieties, a great deal also depends upon the time when the hay is cut. In the eastern and New England states, the farmers usually aim to cut their hay soon after the plants are in bloom, but a considerable part of the crop is cut at a much later period; in the central or corn belt states, the cutting is usually done at a later period. Experiments made at the Kansas Station seem to indicate that the proper time to cut timothy is between the time of full bloom and the period when the blooming has just passed and the seeds are in an early stage of development.

In Farmers' Bulletin 514 on Experiment Station Work, which will be issued soon, the Department of Agriculture will publish a simple method of breeding timothy that has been devised at the Cornell Station. This method is thought to be easy of application and to be adapted to the general use of farmers and especially of timothy-seed growers.

Washington, D. C. G. E. M.

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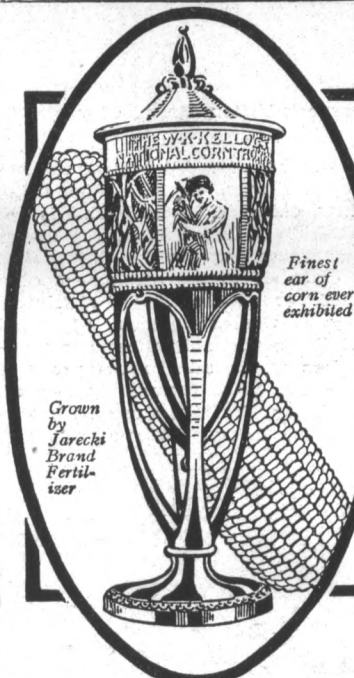
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Read what one man did with our fertilizer: The Jarecki Chemical Co., Cincinnati, O.

Gentlemen:— I am enclosing herewith photos of Grand Champion ear of corn and of the Kellogg Trophy, won by the same at the National Corn Exposition held at Omaha, Neb. This ear of corn won First in State, First in Zone, and First in Grand Sweepstakes for the United States and was said to be the finest ear of corn that was ever exhibited.

You will be interested to know that this ear was from a crop grown with Jarecki Brand Fertilizer on an 18 acre field of various soils, both black loam and clay, which made 95 bushels per acre, all of the show and seed corn quality and type. Another field without fertilization made only 60 bushels per acre. Wishing you success, I am, Yours very truly,

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Increase your yield of corn. Write for copy of "Six mighty good Reasons why YOU should use JARECKI Brand Fertilizers." Free for the asking. THE JARECKI CHEMICAL CO., Sandusky and Cincinnati, O. Agents wanted everywhere. Write for proposition.

## Bores Its Way Through—The Bottom Is Different

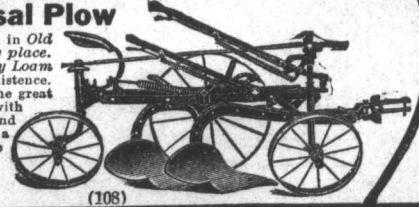
The bottom has a peculiar auger-like shape. That's the whole secret of it—the auger-like bottom. That's what makes the Rock Island "C.T.X." Universal Plow the sensation of the farm world. Instead of throwing the dirt backward and upward, this plow throws it backward and DOWNWARD. Thus a clean furrow and light draft. All trash covered. Dirt well pulverized. Each slice turned clear over, flat and smooth without crimping. No air spaces between top and subsoil to hurt the crop in dry weather. Better plowing than ever was done without a Rock Island "C.T.X." Universal Plow.

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## CEMENT DRAIN TILE AND CEMENT FENCE POSTS.

Are cement tile as good as clay tile? If so, could I make them that would be all right in the winter time if I had a cellar that does not freeze and a hand machine, or would it be impossible to make them in cold weather? How long after they are made will they be fit to lay in ditch? Are cement fence posts all right? What size wire should I use in posts?

Ionia Co.

A. I. B.

It is not possible to speak from actual experience with regard to the lasting qualities of cement tile as compared to burned clay tile or glazed tile. But there is no reason why cement tile should not be as indestructible as burned clay tile. Cement is now used for making all manner of indestructible things, and it is lasting, and there isn't any reason why cement tile will not last as long after it is laid in the ground as any tile. I have used some of them in drains but of course they have not been in use long enough so that I know anything from actual experience, and yet I know well enough that they will last. One trouble with the manufacturers of cement tile is that they are a little afraid to put enough cement in to make them real strong, and one has to be careful about the breakage, because the ones that I used would break more easily than the soft burned clay tile or the glazed tile. The glazed tile are the strongest and you have the least per cent of breakage in handling them, but by being a little careful in handling the cement tile the loss need not be serious.

There is no reason why you can't make these tile with a hand machine in the winter time in any place, like the basement of the barn or the basement of your house, if it does not freeze. They can be just as well made in the winter time as in the summer time. You don't have to have warm weather. In fact, you can work cement where it freezes some if you will use a little salt in the water that you mix the cement and sand with. I am of the opinion that a hand tile machine is entirely practical and the man can make his own tile if he has the time to do so, and by doing so he can save a considerable of the expense of tile draining. The tile are ready to use just as soon as they are thoroughly dried or hardened.

Cement fence posts would be just as indestructible as cement tile. When one has the mould for these fence posts and the wire and will make them out of the proper proportion of cement and sand and leave them until they are properly cured or set, there isn't any reason why they should not last just as long as a man wanted fence posts to last. Of course, it will not be as handy to fasten a woven wire fence to these posts as it is to drive staples into a cedar post, but this can be overcome by having staples fastened into the post as the posts are made. I am of the opinion that the day, however, has not yet come when we can afford to use cement posts, except for end posts for a wire fence. My understanding of the subject is that they cost fully as much or more than cedar posts, and cedar posts are so practical and will last so long that I am of the opinion that it will pay us as long as we can get cedar posts under 20 cents each, to use them in preference to making cement posts. A cement post, of course, is indestructible unless it is broken, and if proper wire is used to reinforce the cement it will take quite a strain to break it, but no doubt they will crack but will be serviceable even after that. I think the size of wire generally used in making cement fence posts is a No. 8 or No. 9 galvanized wire.

COLON C. LILLIE.

## HANGING UP HAMS FOR SMOKING.

This may seem like a very simple matter, and so it is. However, hanging up hams so there is no possible danger of their falling into the fire, or upon the floor of the smoke house is something I learned after considerable experience, having met with more or less loss at different times by having the hams fall into the fire. The way to fix them so there is no possible chance of their falling down—unless the spike or pole on which they are hung gives way—is as follows: Take a butcher knife and cut a small slit through the rind at the hock on the fleshy side; then turn the ham over and cut a small slit through the rind at the end which will hang lowest. Then take a piece of small wire, long enough to go around the ham, pass it through both slits in the rind and twist

the ends of the wire together at the hock, leaving it long enough to reach around the pole or spike. Many hang up hams for smoking by using a string or wire passed through the rind at the hock. When the hams get warm the tender rind often gives way and they are very apt to fall into the fire, ruining them and sometimes setting the smoke house on fire. A case of this kind was reported last year at a meeting of the insurance company of which I am a member. Had this man known how to prepare hams for hanging as described above he need not have been inconvenienced by losing his season's meat supply, and the making good of the loss by the insurance company would not have been necessary.

Ottawa Co.

JOHN JACKSON.

## CROP ROTATION EXPERIMENTS.

The results of twenty years of crop rotation experiments are given in Bulletin No. 100, North Dakota Experiment Station. The authors are Professors J. H. Shepperd and R. C. Donoghue. The plot that has been in continuous wheat for the twenty years averaged a little over 13 bushels, while the average yield of wheat on all the plots in the rotation experiments was 19 bushels. Wheat after corn yielded 7½ bushels more the first year than wheat after wheat—the second year 7½ bushels more, and the third year 2½ bushels more. These results were for corn in hills. Wheat following drilled corn (six inches) gave a less yield than wheat after wheat the first year. The second and third years the increase was about the same as after corn in hills. Manure applied to corn in a four-year rotation with wheat gave an increase in yield. The value of this increase amounted to \$1.40 per load of manure. When applied to millet in a similar rotation the increased value of crops amounted to \$1.65 per load. The rotation of crops proved disastrous to weeds.

Washington, D. C.

R. H. B.

## SCHOOL CHILDREN TO PLANT TREES.

The New York State College of Forestry has sent a letter to the principals of all the high schools and preparatory schools of that state offering to give illustrated lectures and demonstrations upon forestry before the schools so that every child in the state may understand what forestry is and may learn to love the trees and forests.

The planting of a bit of waste land by the school children of each community will definitely connect in their minds the trees and the waste land problem of the nation. If our young people will plant and watch the development of a thousand forest trees, they will see quickly the desirability of protecting our forests from fire and a movement will be started which will result in the right attitude of all our people toward the protection of our forests, both from fire and careless wastefulness. A large proportion of the area of the country is non-agricultural land and is better suited to the growing of forest trees than anything else.

Washington, D. C.

G. E. M.

## BIG SAVING DEMONSTRATED IN TOOL GRINDING.

The United States government has recently been making some very interesting and instructive tests of various tool grinding machines, and the result is an official recommendation to its various forestry and improvement camp supervisors throughout the country.

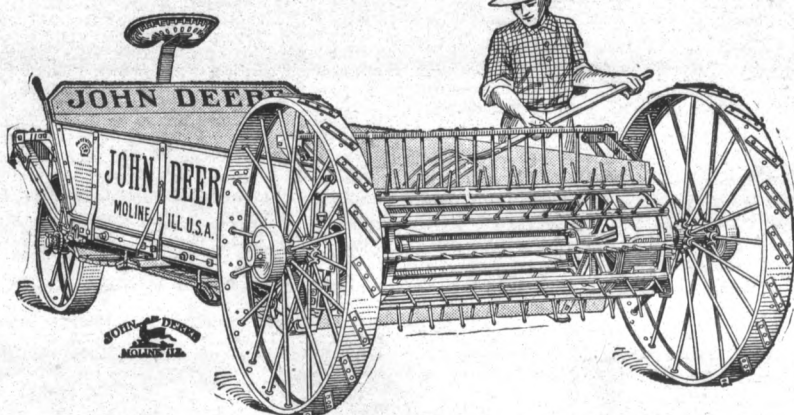
The machine found best adapted for the sharpening of Uncle Sam's tools had a grinding capacity per hour of five double bitted axes, medium dull or as newly purchased. This work required the labor of only one man. In comparison it took two men five hours to grind five similar axes on a good ordinary grindstone of 28 inches diameter. Figuring the cost of labor at \$2.50 a day, the expense of putting an axe in first-class shape with the machine was 6¼ cents as against 62½ cents with the grindstone. This is equivalent to a saving of \$22.50 in one day's steady run.

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## John Deere Spreader

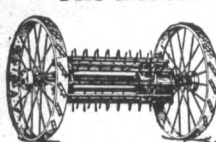
The Spreader with the Beater on the Axle

Revolutionizing the Spreader Business  
Simplest and Strongest Spreader

On the John Deere Spreader, the Spreader with the Beater on the Axle, two hundred working parts that continually give trouble, are done away with. This spreader is so simple and strong that it does not get out of order. It has no clutches, no chains, no adjustments.

The John Deere Spreader is the greatest improvement in spreaders since their invention. It is as much in advance of ordinary spreaders as the self-binder was over the old reaper.

## The Beater on the Axle



The Beater on the Axle

Mounting the beater on the axle makes the John Deere Spreader possible. This feature is fully patented. You cannot get it on any other spreader. The beater on the axle does away with all chains and clutches. It puts the strain and stress of spreading on the main axle—where it belongs—not on the sides of the box or the frame of the spreader.

Mounting the beater on the axle makes the John Deere Spreader easy to load—low down.

## Only "Hip-High"

Sides of the John Deere Spreaders are only "hip-high." The first three feet you lift a fork of manure are easiest of all. From there on to the top of the ordinary spreader is hard work. You lift manure only three feet with the John Deere Spreader. You always see into the spreader, just



Easy to Load

Manure are easiest of all. From there on to the top of the ordinary spreader is hard work.

You lift manure only three feet with the John Deere Spreader. You always see into the spreader, just

Valuable Spreader Book Free—Get this book at once. It contains reasons for using manure—how to apply it to the land, how to store it, and a description of the John Deere Spreader, the Spreader with the Beater on the Axle. Ask us for this book as Package No. Y 5

John Deere Plow Co., Moline, Illinois

where each forkful is needed. Wheels do not interfere with loading.

## Few Parts

There are no clutches to get out of order, no chains to give trouble, and no adjustments to be made on the John Deere Spreader. On old style spreaders, ten to twenty adjustments are necessary before they will work at all. Any one of these, wrongly made, might put the spreader out of business.



Out of Gear

To start spreading with a John Deere Spreader, move the lever at the driver's right back until the finger or dog meets the large stop at the rear of the machine—there is no clutch.

The John Deere Spreader does not get out of order. It is always ready for use.

## Roller Bearings

Roller bearings, few working parts, the center of the load comparatively near the team and the weight distributed over four wheels, make the John Deere Spreader light draft. There are four sets of roller bearings, two between the main axle and the beater, and two in the front wheels.



Roller Bearing John Deere Spreader light draft. There are four sets of roller bearings, two between the main axle and the beater, and two in the front wheels.

## Bridge-Like Construction

The substantial steel frame on John Deere Spreaders has high-carbon structural steel side sills. Like modern railway bridges it is built on the best known principles of steel construction. It is securely bolted, insuring rigidity and perfect alignment, even after years of use.



Built Like a Steel Bridge

## ROUGH WEATHER ARCTICS

No cloth about this "Corn Belt" to get foul and ill-smelling. It is all rubber from toe to top—pure long-wearing rubber. We challenge any maker to put out a better arctic. It is water-proof to the top of the bellows tongue. It's light as is consistent with strength and durability.



BEACON FALLS

## CORN BELT ARCTIC

is strengthened, reinforced, protected at the "strain and wear points." The heel is extra thick and toe has gum knurl cap. Wear it over regular shoes. Has four steel straps strongly attached. 11 inches high.

This is an ideal shoe for farmers' rough, wet, sloppy work in stable, barnyard or field where a high rubber boot is not needed. Ask your dealer for the Beacon Falls Cross Brand in all rubber footwear. If he hasn't it—write us his name and ask for Booklet No. 12.

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## LIVE STOCK

### THE THIRTEENTH INTERNATIONAL.

(Continued from first page.)

The grand championship in individual fat hog classes was won by John Francis & Sons, of Lenox, Ill., on a Poland China barrow in the 12 and under 18 months class. The exhibit was probably the best ever put up at the International and the Berkshires were the only competitors for the championship, their class being especially strong, both in numbers and quality.

The winners of the grand championship in the carlot sheep classes were the product of a Michigan feeder's skill. This distinction was won by E. G. Read, of Richland, Mich., on a load of Idaho range lambs. Mr. Read bought these lambs on the Chicago market on October 14 last at a cost of \$6.25 per cwt. They were purchased in connection with other lambs comprising a bunch of 2,500 head which he is feeding. These lambs were fed just 50 days, being started on oats and bran and a run on grass for the first three weeks, after which they were put on rape pasture and the bran and oats ration gradually changed to corn and oats. At first the feed consisted mostly of bran and at the last nearly all corn. Self-feeders were used throughout the feeding period and the lambs had the run of a rape pasture up until the last two days before being shipped to Chicago, when they were kept housed because of a storm. These lambs were bred in Idaho by the Wood Live Stock Co., who make a specialty of producing Hampshire grades, believing they are the best product for feeding purposes, which can be produced from the native stock.

This load of lambs was closely crowded for first place in the class for western lambs by another load of Idaho lambs fed by Miss Lois McFadden, of Homewood, Ill., who was winner of the first prize on native yearlings last year. Their competitors for the grand championship were the first prize native lambs exhibited by H. O. Hutson, of Ohio, and the western yearling wethers by J. Orton Finney, of Illinois, both winners of first prizes in their classes. In the native lamb class Ben Conley, of Marshall, Mich., who has been a consistent exhibitor of prize winners at the International, won second prize.

In the individual fat sheep classes the championship was won on a yearling Shropshire wether by J. and D. J. Campbell, of Ontario, Canada.

In all of the breeding classes, as well as the fat classes, the exhibit was of an exceedingly good quality and required close study to be fully appreciated. So large was the show that little more can be said in the space at our disposal than to give a list of the championship awards, which so far as available at the writing of this report, were as follows:

#### Carlot Grand Championships.

Cattle.—Ed. P. Hall, Mechanicsburg, Ill., on Angus yearlings.  
Sheep.—E. G. Read, Richland, Mich., on range lambs.  
Hogs.—Geo. N. Runkle, Industry, Ill., on 424-lb. Berkshires.

#### Fat Cattle Championships.

Two-year-olds.—J. D. McGregor, Brandon, Manitoba, on Glencarnock Victor (grade Angus), also grand championship steer of the show.

Yearlings.—Iowa Agricultural College, on Prime Quality, (pure-bred Angus), also reserve grand champion of the show.  
Calves.—J. F. Prather, of Illinois, on Prime Knight, (pure-bred Shorthorn).  
Grand Champion Wether.—J. and D. J. Campbell, Ontario, Canada, on yearling Shropshire wether.

Hogs.—Grand champion barrow, John Francis & Sons, New Lenox, Ill., on heavy-weight Poland China.  
Reserve Grand Champion Barrow.—Iowa State College on heavy-weight Berkshires.

Grand Champion Pen.—John Francis & Sons, Lenox, Ill., on heavy-weight Poland Chinas.  
Reserve Grand Champion Pen.—Iowa State College on heavy-weight Berkshires.

#### Horse Championships.

Percherons.—Grand champion stallion, J. E. Crouch & Son, Lafayette, Ind., on Imprecation. Reserve champion, Burgess Stock Farm, Wenona, Ill., on Kilauea. Grand champion mare, Truman's Pioneer Stud Farm, Bushnell, Ill., on Hyssope. Reserve champion, Burgess Stock Farm, on Kalliope.

Clydesdales.—Grand champion stallion, Graham Bros., Claremont, Ont., on Gleniffer. Grand champion mare, R. A. Fairbairn, New Market, N. J., on Harvieston Baroness.

French Coach.—Champion mare, P. Marshall, Hinsdale, Ill., on Madalline.  
German Coach.—Champion stallion, J. Crouch & Son, Lafayette, Ind., on Minno. Champion mare, same, on Trefrau.

#### Breeding Sheep Championships.

Shropshires.—Champion ram, L. Kam-

merer, Broodhead, Wis., on two-year-old. Champion ewe, J. & D. J. Campbell, Woodville, Ont., on yearling.  
Hampshires.—Champion ram and ewe, Walnut Hall Farms, Donerail, Ky.  
Oxfords.—Champion ram, Geo. McKerrrow & Sons, Pewaukee, Wis. Champion ewe, Peter Arkell & Sons, Teeswater, Ont.

Dorsets.—Champion ram, W. H. Miner, Chazy, N. Y., on lamb. Champion ewe, Nash Bros., Tipton, Ind., on yearling.  
Lincolns.—Champion ram, H. M. Lee, Highgate, Ont., on aged ram. Champion ewe, A. W. Arnold, Galesville, Wis., on yearling.

Cotswolds.—Champion ram, Anoka Farms, Waukesha, Wis., on two-year-old. Champion ewe, E. Brien & Sons, Ridgetown, Ont., on yearling.

#### Breeding Swine Championships.

Chester Whites.—Grand champion boar, Adams Bros., Litchfield, Mich. Grand champion sow, C. R. Doty, Charleston, Illinois.

Hampshires.—Grand champion boar, J. F. Bryson, Edinburg, Ind. Grand champion sow, Sal Tone Stock Farm, Greenburg, Ind.

Duroc-Jerseys.—Grand champion boar, J. S. Goodwin, Chicago, Ill., on Colonade. Grand Champion sow, Mahon Bros., Osborn, O.

#### BREEDERS' MEETINGS AT THE INTERNATIONAL.

##### American Shorthorn Breeders' Association.

The members of this association met at the Congress Hotel on December 4, and elected the following directors: B. C. Allen, Colorado Springs, Col., to succeed former Governor A. C. Shellenbarger, of Nebraska, also Ed. J. Otis of Cleveland, and Daniel Combs, of Hickory Valley, Tenn. The old officers were later re-elected by the directors at the annual meeting.

##### The Percheron Society of America.

The annual meeting of this society was held in the Congress Hotel, Chicago, on the evening of December 3. President Nave, in his address, reviewed the growth of the society, which has taken in 709 new members during the fiscal year and now has a membership of more than 4,500 distributed throughout the United States and Canada. Secretary Dinsmore's annual report showed that during the past year 10,132 animals have been recorded, which is more than 2,000 in excess of the number recorded in any previous year. The report of the financial committee showed the society to have a good surplus in the treasury. The election of directors resulted in the choice of C. M. North, Grand Island, Neb., J. H. Lee, Harveyville, Kansas, A. P. Nave, Attica, Ind., and W. S. Corsa, of White Hall, Ill.

##### The Continental Dorset Club of America.

This club held its annual meeting on December 3. Five hundred dollars for premiums was appropriated for the Panama Exposition in a competition open entirely to members. Twenty-five dollars each will be given as special premiums for Illinois and Indiana state fairs. The salary of the secretary was doubled. The following officers were elected for the ensuing year: President, H. H. Wheeler; vice-president, H. H. Cherry; secretary-treasurer, Joseph E. Wing; executive committee, Mark McClure, Arthur Danks and H. H. Cherry.

##### The American Shire Horse Association.

This association met on December 3, with a representative attendance of breeders. The secretary's report showed the association to be in a satisfactory financial condition with an increase in registration in both imported and home-bred animals. No officers were elected as they serve two years. J. H. Truman, the veteran English exporter, made an address which was cordially received. Other addresses filled out the time and made the meeting a profitable one for the members.

##### American Aberdeen Angus Breeders' Association.

The meeting of this organization was held at the Grand Pacific Hotel, on the evening of December 3. The secretary's report showed the total of 1,066 entries for the year and 157 new members enrolled in the association. The financial condition of the association was shown to be excellent. Election of officers resulted as follows: President, H. J. Hess, Waterloo, Ia.; vice-president, W. N. Foster, Attica, Ind.; secretary, Chas. Gray, Chicago, Ill.; treasurer, C. J. Martin, Jefferson, Ia. New members of the board of directors: John D. Evans, Chas. Escher, Jr., Garrett Tolan. Members of directory holding over: A. C. Binnie, H. J. Hess, W. N. Foster, M. A. Judy, E. F. Caldwell, H. M. Brown.

##### American Shetland Pony Breeders' Association.

This association held its annual meeting with a dinner for members in the

Hotel Sherman. George Heyl, of Washington, Ill., was chosen president; J. R. King, of Chicago, vice-president, and Miss Julia Wade, Lafayette, Ind., secretary.

##### The American Yorkshire Club.

This organization held a meeting at the Stock Yard Inn on the evening of December 4. The officers' report showed the affairs of the club to be in a gratifying condition. The report of the board of directors indicated that they expect the Yorkshire breeders to profit by the opening of the Panama Canal, which will stimulate trade of Yorkshire breeders in foreign countries. President Fisher read the annual address and short talks on the Yorkshire hog were made by other breeders.

##### American Milch Goat Record Association.

The eighth annual meeting of the American Milch Goat Record Association was held in Breeders' Hall at the Union Stock Yards, Chicago, Ill., Tuesday, December 3, 1912, at 2:00 p. m. The secretary-treasurer submitted his annual report. There were 115 new registrations of milch goats and 35 transfers issued during the past year. Thirteen new names were added to the membership.

The "foot and mouth" disease still continuing to be prevalent in England and Europe, no importations will be permitted probably next year. For the information of those not knowing, no importation was made the past year. The election of officers resulted in continuing the same members for another year: President, W. A. Shafer, Hamilton, Ohio; vice-president, Prof. Francis King Cooke, Winnetka, Ill.; secretary-treasurer, J. C. Darst, Dayton, Ohio.

Directors.—E. L. Petersen, Plymouth, Wis.; Winthrop Howland, Redlands, Cal.; Herbert Spencer Greims, New York City; D. S. Zook, Wooster, Ohio; Rev. D. Campbell Mayers, Casanova, Va.

##### FEEDING EXPERIMENTS WITH PIGS.

In a feeding test with 20 pigs lasting 160 days, on a ration of corn chop, buttermilk and barley and sorghum forage, conducted at the Oklahoma Station, the average daily gain was .51 lbs. as compared with a gain of 1.22 lbs. on corn chop and buttermilk. A lot of hogs turned into a field of corn yielding at the rate of only 17 bushels per acre made a gain of 1.2 lbs. per head. Estimating the value of the gain at seven cents per pound, the hogs returned a value of 63.15 cents per bushel.

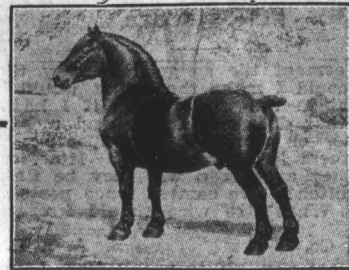
A test of ear corn vs. ear corn and supplementary feeds for 16 hogs averaging about 200 lbs. in weight gave the following result: On ear corn alone the average gain per head and day was 1.02 lbs. at a cost of 4.57 cents per lb.; on corn and tankage a gain of 1.09 lbs. at a cost of 4.74 cents per lb.; on corn and alfalfa meal, a gain of 1.02 lbs., at a cost of 5.3 cents per lb., and on corn and alfalfa hay, a gain of .96 pound at a cost of 5.76 cents per pound.

##### HOG CHOLERA IN IOWA.

Dr. E. A. Buxton, the veterinarian of Vinton, Iowa, states that hog cholera is costing that state fully fifteen million dollars this year, and the \$5,000 appropriated by the state authorities for fighting the disease is utterly inadequate. The serum treatment has proved effective where used, he says, and the same statement is made by officers of the Iowa Veterinary Association. The secretary of that organization says the appropriation of the state for stamping out the malady should be increased to at least \$50,000. Not long ago the disease broke out in the Iowa Experiment Station, and tested serum was used promptly, with highly satisfactory results. Two hogs had already died from the disease, and at the time of inoculation quite a number of the swine were sick, but the serum worked so well that only one more hog died. Since then there has been no more trouble from sickness in the herd. The secretary of the department is proud of the fact that out of three hundred hogs only three hogs died. Director W. J. Kennedy, of the Iowa State College, places the loss this year in Iowa from hog plague at an aggregate of fully eighty million pounds of pork, or 35 lbs. or more for every man, woman and child in the entire state. It having been found impossible to procure enough tested serum promptly in the state, although the authorities paid high prices to manufacturers for serum, the state of Kansas was called upon for assistance, which was at once responded to, and the Kansas serum has been sold to Iowa farmers by the Iowa authorities at its actual cost.

##### Michigan Farmer Sells Rams.

Ira B. Baldwin, Hastings, Mich., who has been advertising Rambouillet rams, writes: "I have sold rams lately to beat the band, through my advertisement in the Michigan Farmer."



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### NEW IMPORTATION

We have given more than a quarter century to importing, breeding and distribution of the Belgian horse. We handle no other breed and believe we have now in this new importation of stallions and mares a class of horses that will please you, and all are for sale at prices not equalled by anyone in the business when merit is considered. Will be pleased to have you ask about them and to visit us at any time.

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Open the season with the finest aggregation of

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they have ever offered to the breeding public. 60 Head to select from.

**P. O. Belding, Mich. R. R. Orleans.**

## PERCHERONS

bred for utility as well as show quality. Stable includes several international winners. Three 2-year-old stallion colts of quality for sale. Come, or write B. F. ANDERSON, R. No. 3, Adrian, Mich.

**PERCHERONS**—One extra good dark gray, 3-year-old Stallion, a ton horse, also yearling stud colts. **R. OVERHOLT, Dutton, Mich.**

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## FEEDERS' PROBLEMS.

## Does Rape Cause Scurvy in Pigs?

Does rape cause scurvy in pigs? If not, what would cause it, and what is the remedy?

Washtenaw Co.

A. M. W.

Scurvy may be taken to indicate any one of a number of skin diseases which affect pigs and which may be due to different causes, such as are due to parasitic infection, such as mange, ringworm, etc., or various contagious ailments to which pigs are subject may cause an eruption of the skin. It is generally conceded, however, that when small pigs are allowed to run in rape of sufficient size so that they become wet from the dew or rain which collects on the plants, it has an irritating effect upon the skin and they become scurvy and sore, with disastrous results so far as their thrift is concerned.

In such cases the obvious remedy is to remove them from the rape and feed them on a nutritious and well balanced ration. At the same time it would be well to give local treatment by washing in a solution of one part coal tar disinfectant to ten parts water and applying some sort of healing lotion. Where parasitic trouble is also suspected one part kerosene may be added to two parts of vaseline, or one part sulphur to two parts lard. If the trouble is simply irritation, however, these more active remedies would not be required. Too much starchy food should not be used with pigs in this condition and a laxative ration should be fed.

## Ground Oats vs. Middlings for Pigs.

Which is the more economical for growing pigs, ground oats at \$1 per cwt. or middlings at \$1.45 per cwt., fed with ground corn?

Barry Co.

A. J. B.

At the Wisconsin Station in trials of a combination of ground oats and corn meal, this ration was found most economical when fed in the proportion of one-third oats to two-thirds corn meal. In this trial it was found that the feeding requirements for 100 pounds of gain was comparatively low, the lowest amount of feed required on this ration for 100 pounds of gain being 402 pounds. At the Missouri Station it was found that where equal parts of middlings and corn meal were fed 439 pounds of this combination was required for 100 pounds of gain. Of course, without data relating to the age and size of the pigs or other factors entering into the trial, the comparative results of the single trials are not conclusive. Theoretically, middlings would be a better feed to mix with corn meal than ground oats and for very young pigs would probably be more economical at the present price of oats, at least as a factor in the ration. But available data of official trials would indicate that for pigs of suitable age, so that the increased amount of crude fiber in the oats would not prove objectionable, the ground oats would be the most economical feed in the proportions above mentioned. It would, however, undoubtedly be a matter of economy to add a small amount of feed rich in protein, such as digester tankage in the ration to secure a better balance and more rapid growth or less waste of the carbohydrate element in the ration fed.

## FIGHTING HOG CHOLERA BY PATRONIZING HOME BREEDERS.

As a breeder of hogs for the last 25 years I have observed that this state gets more hog cholera from the shipping in of breeding stock from other states than in any other way. I have noticed that both breeders and farmers are inclined to send to the far west, or to some other section where hog cholera is very common. Such stock is usually shipped into the state about fair time and shown at some large or small fairs, coming down, while there, with the cholera, and in this way spreading the disease. When I buy hogs abroad, I buy at a season when hog cholera is not apt to be raging, and even then I keep them by themselves for a long time to see if they develop any ailment.

But why should we buy breeding stock abroad when it is well known to the breeding fraternity that Michigan has as good, if not the best, breeding stock of any state in the union? So I would like to ask my brother readers and neighbor farmers, why not buy breeding stock of each other and improve the already good stock of hogs we have? Then, instead of listening to the whoop and howl of western breeders, set up a hue and cry of our own, through the Michigan Farmer and other good papers of our state, that we not only have the leading hog stock of the union, but that our animals are also

healthy and our state practically free from hog cholera, for if other states will stop shipping us hog cholera we will soon be free from it and able to not only supply our own needs but also have some good healthy stock to spare for neighboring states. Think it over, brother breeders and neighbor farmers, and let us talk it over this winter through our splendid talking trumpet, the Michigan Farmer.

Montcalm Co.

ROBT. NEVE.

## LIVE STOCK NOTES.

Horses had a limited sale last week, the last public auction sale taking place Wednesday, as the stables at the stock yards were required after that day for the horses on show at the International Live Stock Exposition. The receipts were quite small, but enough horses were offered to go around, and prices were no higher. The commoner animals were salable at \$75@100 per head, while farm workers were slow at \$90@185, with sale of delivery wagon horses on a basis of \$130@210. Loggers and feeders were quoted at \$90@230 and fair to prime drafters at \$150@260.

The greatly inadequate offerings of old, thin canning cows and bulls in the Chicago market for many weeks has proved a serious matter to the packers, who have experienced much difficulty in securing sufficient material to keep their big canning forces employed regularly. The extremely high prices for beef everywhere have resulted in materially increasing the demand for canned beef and other canned meat products, these being sold at comparatively low prices in the markets of the world, and just when the need was greatest the supply of canning cattle in the greatest market in the world fell off seriously. This necessitated sending out buying agents from the Chicago canning establishments and they have scoured all the markets of the east and middle west for canning cattle. They have secured large numbers of canners in their travels, and on a recent day the Chicago packers had in 146 car loads of canning cattle from such markets as St. Paul, Milwaukee, Louisville, Cincinnati, Buffalo and Indianapolis.

In recent weeks Chicago market prices for fat lambs and sheep have been relatively higher than in other markets east and west, and this has drawn large numbers from such states as Ohio, Michigan and Indiana to that market. The highest markets in the country have been those on the Pacific coast, that region being short on live muttons. At no time has the demand for feeding lambs abated in volume, and prices have shown great firmness, advancing frequently, although ruling, with finished flocks, much below live prices of a year ago.

It is extremely regrettable that with such a superabundance of corn, oats, hay and roughage, farmers should go through the winter season now starting in with small supplies of cattle, hogs and sheep. Recent sales of corn in the Chicago market have been all of 17c per bushel lower than a year ago, while oats sold as much as 18c lower and wheat from 10 to 12c lower than a year ago, the single bull feature in the wheat trade being the Balkan war and possibilities of its spreading so as to include the big European powers. Wheat and oats have been marketed with extreme liberality ever since harvest—far more than a year ago—and it was impossible to avert big falls in values. Corn is so cheap that farmers are to a large extent planning on cribbing as much corn as they have room for after husking is finished, western farmers obtaining only 33c a bushel. Recently the corn receipts at primary points have fallen off because of the refusal of the cash houses to buy as liberally as usual. Of late the receipts of oats in the Chicago markets have fallen off in their average grading, and supplies of high-grade oats are expected to fall behind in volume.

Because of the enormous domestic consumption of fresh and cured hog products, the accumulations of provisions have been greatly lowered within recent months, and stand much smaller than a year ago, every new month showing large reductions. A year ago the packers were manufacturing liberal quantities of lard, hams, bacon, etc., but for many weeks the requirements for the fresh pork trade have used up most of the hogs. The export trade has fallen greatly behind, however, because of the dearth of cured hog products, and exports from this country for the present calendar year are making a poor showing as compared with 1911. Pork exports for the year furnish the single exception, having aggregated 37,081,000 lbs. during the first 10 months of the year, against 35,186,000 lbs. for the same period last year. Lard exports aggregated but 334,733,000 lbs., compared with 439,378,000 lbs. for the same time last year. Ham exports amounted to 149,235,000 lbs., compared with 155,040,000 lbs. last year, and exports of bacon aggregated 158,446,000 lbs., compared with 160,637,000 lbs. a year ago.

Prospects for hogs are believed to warrant owners of healthy, growing young hogs holding on to maturity, with cheap feed everywhere and a serious shortage in the country's supply. While prices have undergone the large decline incidental to the beginning of the winter packing season, there seems to be little probability of their falling to a level that would render the fattening process unprofitable.

Clarence Ragsdale, of Monroe county, Mo., owns 200 healthy hogs, 11 sows having farrowed 88 pigs in a recent week. He says he never has hog cholera among his pigs and is not fearful. "I watch my hogs all the time," he says, "and when they begin to cough or their hair looks unhealthy, I feed them on lye, lime and ashes, often on tobacco. I never lose any hogs from cholera."



# June Milkings all the year round

Most anybody can make a dairy pay in spring-time, but it takes science to make it equally profitable in the drought of August and the zero weather of mid-winter. We know what we are talking about because we used to be cattle men ourselves. And we found out how to make June forage last all year and how to get June milkings in mid-winter. That's why we went into the Silo business. The

## INDIANA SILO

has revolutionized the live stock industry. It is the practical product of practical farmers. When we made the first Indiana Silo ten years ago we made a better silo than anybody had ever made before. We sold it before it was finished and then made another even better than the first. Altogether we built 50 Indiana Silos that year.

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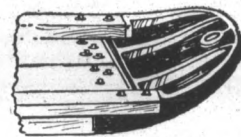
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## Profits On The Farm



Caldron kettle cooker (catalog shows six other sizes) includes one-piece kettle, enclosed in steel jacket. Cooks feed, fattens hogs—all stock sick and well. Price, freight paid. 55 gallon capacity..... **\$11.90**



For hauling rocks or implements from the field; made of No. 1 pig iron, and easily completed with your own lumber and bolts. Price of Stone Boat Nose only, freight paid..... **\$2.56**

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Sold on a guarantee of satisfaction or money back. Send your order quick or write for our catalog. Don't put this off—do it today.

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Everlasting cast iron tank heater No. 2—sinks itself in the water—stationary pipe, with removable firepot and ash pan; burns any fuel. Price, freight paid..... **\$5.60**



Sanitary Cast Iron Hog Trough—No Seams—No Chance for Feed to be absorbed and spoiled. Cast in one piece—smooth, substantial—will last a lifetime. Three sizes; medium size shown, 4 feet long, weighs 65 pounds, freight paid..... **\$2.56**

## WINCHESTER

### .22 Caliber Cartridges.

.22 Caliber cartridges are so small and cheap that some manufacturers don't take much pains with them. That's why some don't go, while others may go some, but not enough to amount to anything. You can't make this complaint about Winchester 22s. Just as much pains is taken in their manufacture as in that of the large caliber cartridges that cost money. They are loaded by automatic machinery, which must supply a full charge to each cartridge and seat the bullet properly. They are sure to go off and send the bullet with snap enough to hit hard. Ask for the Red W Brand. They cost no more than others.

WINCHESTER REPEATING ARMS CO., New Haven, Conn.



# VETERINARY

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

**Vomiting.**—Have cow that has thrown up her feed for the past two weeks. She eats heartily, but fails to keep it down. Have consulted our local Vet. but he informs me that he has never had a case of this kind. A Subscriber, Gd. Ledge, Mich.—This is not a common ailment in cattle; however, it does sometimes occur. Vomiting should not be confounded with rumination. In this case, however, it may be only a disordered and irregular rumination. It is perhaps caused by a disordered state of the digestive system, may be due to a partial closing of the opening into the second stomach or possibly a distention of the gullet. I have known cases when there was a cancerous and diseased condition of the fourth stomach. The animal should be kept quiet, especially after eating a hearty meal, easily digested food and plenty of water should be given. Give ½ oz. of chloral hydrate and 8 ozs. of whiskey in a pint of cold water as a drench two or three times a day. A liquid or semi-solid diet for a few days is advisable. I find treating this kind of a case, it is done with some speculation, for it is difficult to make a correct diagnosis.

**Indigestion.**—We have taken your paper for the past several years and are well satisfied with it. Have a cow that has been out of condition for the past month, she eats and drinks well, is some stiff in hind quarters, bowels and kidneys act fairly free, but she is growing poorer daily. She has good care and we are anxious to put her in condition. J. N. Grayling, Mich.—Give her 1 oz. ground gentian, 1 oz. ground ginger and 1 oz. bicarbonate soda at a dose in feed three times a day.

**Ridgling Hog.**—I have been a reader of the Michigan Farmer for many years and find it a very useful paper and especially the veterinary column, as it contains a great deal of valuable information to farmers and stock men. I want to consult you regarding a barrow, one of a pair that had been altered before I bought them. I am inclined to believe one of them was not properly castrated, as he acts very much like a boar. They are both shut up to fatten and are about fit for pork, but do not intend to kill them for a few weeks. What do you advise me to do with this pig? H. C. B. Royston, Mich.—One of the testicles or perhaps neither of them, have appeared in scrotum, consequently he is what is termed a ridgling. In order to operate on him, an abdominal opening would have to be made, therefore it involves some risk and if I were you, should continue feeding him, but perhaps keep him in pen by himself. The flesh of him will not taste strong.

**Infantile Paralysis.**—Can you suggest treatment for kittens three months of age that appear to have difficulty in walking and are unable to climb. They seem to be unable to direct their movements and frequently travel sideways. Their heads tremble and they walk with a straddling gait. They eat well, are plump and playful. W. S. Cheboygan, Mich.—I am inclined to believe that your kittens will not recover; however, they will be benefited by giving them 1 gr. of powdered areca nut for each pound they weigh and this medicine should be given to them daily for three days, then give it twice a week for two weeks. They may possibly be troubled with worms. Also give a few grains of ground gentian at a dose two or three times a day.

**Cough—Stocking—Indigestion.**—Have a black driving mare nine years old that is unthrifty. I feed her two quarts of oats at a feed twice a day and some condition powder mixed with it. I also feed her a few carrots, hay and corn ensilage. For the past six weeks she has been coughing, and I might add that last spring she had an attack of laryngitis. She also stocks in left hind leg. I also have an eight-year-old horse that is rough in coat which I have given worm medicine, but have not seen him pass any worms. C. D. C., Clio, Mich.—Mix together equal parts ground gentian, ginger and licorice and give her two tablespoonfuls at a dose in feed two or three times a day. For your other horse give ½ oz. red cinchona, ½ oz. ground gentian, ½ oz. bicarbonate soda and 1 dr. ground nuxvomica at a dose in feed two or three times a day.

**Mourning for Colt—Kidney Disease.**—On Oct. 31 I weaned colt and it thrived nicely. The mother, which is again in foal, has not done well. She seemed to mourn for colt, grew weak, soon required assistance to help her up. Her urine is very dark colored and I am inclined to believe she has kidney trouble. She has had good care and plenty of feed and for some time had a fairly good appetite, but lately does not eat enough. A. L. R., Deford, Mich.—You made a mistake in separating mare and colt; they should have been kept in adjoining stalls night time. Give her 1 dr. fluid extract nuxvomica, 1 oz. fluid extract gentian and 1 oz. fluid extract cinchona at a dose in a pint of water as a drench or in feed three times a day. Also give her a teaspoonful acetate of potash and a teaspoonful tincture digitalis at a dose twice or three times a day. She should be fed plenty of nourishing food.

## 25 Head. Auction Sale of Jerseys. 25 Head

### WEDNESDAY, DECEMBER 18th, 1912, 1 P. M.

#### One Herd Bull, 9 Registered Cows and 3 Heifers, 6 High Grade Cows and 6 Grade Heifers: all tuberculin tested.

Lucy's Rloter of St. Lambert 3rd. 75015. Bred by Hugh K. Stewart, Washington Court House, Ohio. Sire Lucy's Rloter of St. Lambert 63998. Said to be the greatest St. Lambert bull in Ohio.  
Dam Bessie B. Marigold 186276, by Pedro's Sir Marigold 54510. Lucy's Rloter has eleven daughters in sale.  
Six of the cows freshened this fall, the rest between now and spring.  
The sale will be under cover on my farm a half mile west of Walnut Avenue Station on the Orchard Lake Division of the D. U. R.  
Post Office, Orchard Lake, Mich.

HENRY G. KYLE, Auctioneer.

H. WILL GREEN, Proprietor.

### Hog Book Free.

Great value to hog men. On care and diseases of hogs. Tells how to destroy worms, cure and prevent disease. Sent free. Write Dr. D. C. Snoddy Co., Nashville, Tenn. Dept. D

Inventions Sought by Capital. Write for free Book  
**PATENTS that PAY BEST**  
R. S. & A. B. Lacey, Dept. 89, Washington, D. C.

**For Sale**—Horses, cattle, sheep, swine and poultry, nearly all breeds. Sires exchanged. South West Michigan Pedigreed Stock Ass'n., David Woodman, Sec'y. Treas., Paw Paw, Mich.

### BREEDERS' DIRECTORY.

#### CATTLE.

**ABERDEEN-ANGUS.**  
Herd, consisting of Trojan Erics, Blackbirds and Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec., 1910. A few choice bred young bulls for sale.  
WOODCOTE STOCK FARM, Ionia, Mich.

**AYRSHIRES**—One of foremost dairy breeds; young bulls and bull calves for sale. Berkshire swine. All pure bred.  
Michigan School for Deaf-Blind, Flint, Mich.

**GUERNSEY BULL CALVES, YORKSHIRE PIGS.** Good Stock.  
HICKS GUERNSEY FARM, Saginaw, W. S., Mich.

**GUERNSEYS**—Bull calves from high producing ancestors. Herd tuberculin tested. No females for sale. ALLAN KELSEY, Lakeview, Mich.

**10 Registered Guernseys**  
Cows in milk. Bulls and bull calves. Write today for sale list. G. A. WIGENT, Watervliet, Michigan

**8 REG. GUERNSEY BULLS**—serviceable age; sire Imp. Must be sold Nov. 15. Come down and see them. Cheap. JOHN EBELS, R. 10, Holland, Mich.

**HATCH HERD HOLSTEINS**—Choice sires from ARO dams. Reasonable prices. HATCH HERD, Ypsilanti, Michigan.

**HOLSTEIN Bull Calf**—11 mo. old. Dam and Grand-dam has A. R. O. records of 18.74 lbs. and 24.98 lbs. butter in 7 days. Will sell for \$80. B. B. REAVEY, Akron, Michigan.

**HOLSTEINS**—Machine on high speed now. I am selling \$100 bull calves for \$75 delivered, and can prove it with pedigrees and photos. HOBART W. FAY, Mason, Michigan.

**Holstein-Friesian Cattle**—The kind that make good.  
GREGORY & BORDEN, Howell, Michigan.

**HOLSTEIN BULL CALVES**—Sired by our 30-lb. bull A.R.O. dams. Duroc Jersey boars and gilts of best blood lines. E. R. CORNELL, Howell, Mich.

**Holstein Bull** De Kol 2nd. Butter Boy 3rd. Sired by best son of Pontiac Butter Boy. Price only \$50. C. D. WOODBURY, Lansing, Mich.

**PRINCE BARRY DeKOL No. 98325.**

**HOLSTEIN BULL CALF** (8 months old).  
This splendid individual(s) sired by Fidesa Romeo of Riverside No. 3848, dam Boardman Daisy No. 13901, H. F. H. B. He is from the best ancestors of the Holstein family. His pedigree contains many of the most noted animals of the breed close up. Certificate of Registration and Pedigree go with calf. Reasonable terms for quick sale.  
P. T. COLGROVE, Hastings, Michigan.

## Bigelow's Holstein Farms

### Breedsville, Mich.

Have for sale several fine young bulls out of cows with high official butter and milk records.  
Send for circular.

## Holstein Bulls.

1 Holstein Bull	\$ 60
1 Holstein Bull	75
1 Holstein Bull	100
1 Holstein Bull	150

From 3 to 12 months old. All from A.R.O. dams.  
**LONG BEACH FARM,**  
Augusta, Michigan.  
**FRED S. KENFIELD, Proprietor.**

## Must Be Sold By Dec. 15

**Holstein Bulls** ready for service. Sired by Johanna Concordia Champion, whose dam and two grand dams average 29.32 lbs. butter in 7 days. Avg. fat 4.5%. You can buy a bull right if you do it by the above date. Who will be the first to get a bargain? Twenty-five cows and heifers bred to the above bull also for sale.  
**L. E. CONNELL, - Fayette, Ohio.**

**FOR SALE—HOLSTEIN BULL CALF**  
Born June 5, 1912, sire a son of the King of the Pontiacs from a daughter of Hengerveld De Kol. Dam of calf, an A. R. O. daughter of Sadie Vale Concordia's Paul DeKol, her dam a 20 lb. imported cow.  
**ED. S. LEWIS, Marshall, Mich.**

**FOR SALE**—6 yearling Holstein Friesian Bulls, 2 A. R. O. bred. Some cows. Also bull calves. 34 years a breeder. Photos and pedigrees on application. W. O. Jackson, South Bend, Ind., 719 Rex St.



Purebred Registered  
**HOLSTEIN CATTLE**  
The Greatest Dairy Breed  
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**"Top-Notch" Holsteins.**  
Choice bulls from 11 to 14 mos. old, of fashionable breeding and from dams with official milk and butter records for sale at reasonable prices. Also young bull calves.  
**McPHERSON FARMS CO., Howell, Michigan.**

**Lillie Farmstead Jerseys**  
(Tuberculin tested. Guaranteed free from Tuberculosis.) Several good bulls and bull calves out of good dairy cows for sale. No females for sale at present. Satisfaction guaranteed.  
**COLON C. LILLIE, Coopersville, Mich.**

**FOUR CHOICE A. R. O. HOLSTEIN BULL CALVES**  
from six weeks to one year old. Price \$40 to \$150. ELLIS W. DORIN, Brookside Farm, Sunfield, Mich. R. F. D. 3.

**BULL CALVES**—Richest Hengerveld, Dekol and Korndyke breeding. Special prices for quick sale. YPSILANTI FARMS, Ypsilanti, Mich., Cole Brothers, Owners.

**REGISTERED Holstein Cattle**—Two good bull calves. 1 Herd headed by Hengerveld Coin Pieterdie. Barred Plymouth Rock Cockerels.  
**FLOYD F. JONES, R. F. D. 3, Oak Grove, Mich.**

**Jersey Cattle For Sale.**  
C. A. BRISTOL Fenton, Michigan.

**Jerseys**—Bulls ready for service, bred for production. Also cows and heifers. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

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

**FOR SALE**—Jersey Bull Calf—born Dec. 26th, 1911. First class individual from the best of blood lines. WATERMAN & WATERMAN, Meadow Land Farm, Ann Arbor, Mich.

**FOR SALE**, Jersey Bulls, old enough for service, sired by a grandson of Imp. Interested Prices and from cows that produce 400 to 500 lbs. butter annually. A. Newman Rl, Marlette, Mich.

**RED POLLED BULLS FOR SALE**—from good milking strains. JOHN BERNER & SON, Grand Ledge, Mich.

**Scotch Shorthorn Bulls and Heifers for Sale.**  
W. W. KNAPP, Howell, Michigan.

**Dairy Bred Shorthorns**—Beef type, dairy strain, young bulls, 7 months old for sale. Cash or good note. J. B. HUMMEL, Mason, Mich.

**Dairy Shorthorns**—Large Cattle—Heavy Milkers, Milk Records Furnished. Bulls all sold. Prices right. A square deal to all.  
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#### SHEEP.

**Oxford Down Sheep**—Good Yearling Field Rams of all ages for sale.  
I. R. WATERBURY, Highland, Michigan.

**OXFORD RAMS**—sired by and ewes sired by and bred to Imported Rams for sale. B. F. MILLER or GEORGE L. SPILLANE, Flint, Mich.

**OXFORDS** for sale, at reasonable prices; twenty-five two-year-old OXFORD rams; four two-year-old SHROPSHIRE rams; and five yearling Shropshire rams.  
**PARKBURST BROS., Reed City, Michigan.**

**"BREED UP YOUR SHEEP"**—Article sent free to any address.  
**PARSONS, "The Sheep Man of the East,"** R. No. 1, Grand Ledge, Mich.

**Northern Grown Shropshire Sheep and Berkshire Swine.** Yearling and two-year-old rams, two boars old enough for service, one of the best Jersey bulls in Mich. 3 yr. old. Blue Belle Golden Lad 9851. Will be sold cheap if taken at once. D. C. Magahay, R. 1, Harrisville, Mich.

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THE chance of your life time to start a flock of Reg. Rambouillets, 24 Breeding ewes and 10 Elegant Ewes lambs, bred right. Must sell. Ira B. Baldwin, R. No. 4 Hastings, Michigan.

**SHROPSHIRE FOR SALE**  
50 Choice two-year, yearling and ram lambs; 20 yearling ewes from imported sires.  
**F. R. OTTAWAY, Flushing, Mich.**

**FOR SALE**—Choice Shropshire Yearling Rams in lots of one to twenty. Prices right. JONES & MORRIS, Flushing, Mich.

**Shropshire Rams and Ewes** at farmers' prices. HARRY POTTER, Davison, Mich.

#### HOGS.

**THREE** choice Berkshire Boars ready for service, to close out. Write me your wants, we will please you with our stock. A. A. PATTULLO, Deckerville, Mich.

**BERKSHIRE BOARS**  
May and June farrow, large size, heavy bone. \$18 and \$20 each. GEO. E. LAPHAM, St. Johns, Michigan.

**BERKSHIRES**—Choice spring boars and gilts, priced to move quick. Farmers stock. ELMHURST STOCK FARM, Almont, Mich.

**Magnificent Berkshire Service Boars** by celebrated Duke and Prime Bacon. Little better than pork price. A Bargain. Rougemont Farms, Detroit, Michigan.

**Quick Maturing Berkshires**—Best breeding; best type. Satisfaction guaranteed or money refunded. C. S. BARTLETT, Pontiac, Mich.

**Improved Chesters**—Young breeding stock, either sex. Also a few tried sows to be bred for spring farrow and early fall pigs. W. O. WILSON, Okemos, Mich.

**O. I. C.**—TWO BOARS fit to head any herd. Fall pigs ready to ship.  
C. J. THOMPSON, Rockford, Michigan.

**O. I. C's** Choice gilts, bred or open. Fall pigs, either sex, at farmers' prices. CHAS. SEVERANCE, Deford, Michigan.

**O. I. C.** Extra choice bred gilts, service boars and spring pigs, not akin from State Fair winners. Avondale Stock Farm, Wayne, Mich.

**O. I. C's**—All ages, growthy and large, sows bred. Males ready, 100 to select from. Attractive prices on young stock. H. H. Jump, Munith, Mich.

**O. I. C's** of superior quality. 17 choice young gilts and 11 topy young boars. Pairs no akin. FRED NICKEL, Monroe, Michigan.

**O. I. C. SWINE** Write me for Pigs, pairs and trios, not akin. Have a number of service males of good type. Write me describing of your wants. A. J. GORDEN, R. No. 2, Dor, Mich.

**O. I. C. Swine**, both sexes. Males weighing 100 to 225 lbs. Herd registered in O. I. C. Association. GEO. P. ANDREWS, Dansville, Ingham Co., Mich.

**O. I. C's**—Fall pigs, either sex, from prize-winning stock. Also 2 May boars left. Call or write. Rolling View Stock Farm, Cass City, Mich.

**Reg. Chester Whites**—Both sexes and bred gilts, also bulls. Bargains. RAY PARHAM, Bronson, Mich.

**O. I. C's**—A fine lot of last spring stock for sale, big growthy type, either sex, pairs not akin. Sired by Grand Champion boar, Scott No. 1. Half mile west of depot. OTTO B. SCHULZE, Nashville, Mich.

THIS

# O. I. C.

SOW WEIGHED 932 LBS.  
AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan. "How to Make Money from Hogs." C. S. BENJAMIN, R. No. 10, Portland, Mich.

**DUROC-JERSEYS**—Fall and Spring boars from prize-winning strains. Sows all ages. SPECIAL BARGAIN in summer pigs. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

**LARGE TYPE DUROCS**—Spring pigs that are large open fall gilts of the right sort. Let me tell you about anything you may be in need of or call at MAPLE GROVE FARM, Stockbridge, Michigan.

I HAVE some extra good DUROC males for sale. Prices right, last fall and spring farrow. Breeding and quality my standard. Bred sow sale this winter. H. G. KESSLER, Cassopolis, Michigan.

**Duroc Jerseys**—for sale: 20 fine service boars of fancy breeding and individual quality. Prices reasonable. John McNeill, North Star, Mich.

**DUROC JERSEYS—25 SPRING BOARS FOR SALE.**  
CAREY U. EDMONDS, Hastings, Michigan.

**Duroc Jerseys for Sale**—Spring boars ready for service. Holstein Friesian bull calf, dropped Sept. 26. Write or come and see. R. G. VIVIAN, R. No. 4, Monroe, Mich.

**DUROC GILTS**—\$20 to \$30. Shropshire Ewes \$20 to \$30. KOPE-KON FARM, Kinderhook, Michigan.

**Duroc Jersey SWINE.** Spring and summer pigs for sale, both sexes. I pay express. 25 years experience. J. H. BANGHART, Lansing, Mich.

**Big Smooth Poland China Hogs** from large sires, either sexes, at reasonable prices. ALLEN BROS. Paw Paw, Mich.

**BUTLER'S** Big Type, Big Bone Poland Chinas combine size, bone and a reasonable amount of quality, but size and bone come first. Here we offer the biggest boned yearling boar in Michigan for \$40. Some big spring boars by him, and 50 fall pigs at \$8 each or \$15 per pair; pairs not akin. Pedigree with every pig. J. C. BUTLER, Portland, Michigan.

**POLAND CHINAS**—Either sex, all ages. Something good at a low price. P. D. LONG, R. No. 8, Grand Rapids, Mich.

**Big Bone, PROLIFIC POLAND CHINA BOARS** ready for business. Quality high, prices right. Write today. Maplewood Stock Farm, Allegan, Mich.

**POLAND CHINAS**—Both Western and Home Bred. Either sex, all ages. Prices right. W. J. HAGELSHAW, Augusta, Mich.

**POLAND CHINAS** Spring boars ready for business. Extra good length and bone. Prices right. L. W. BARNES & SON, Byron, Michigan.

**LARGE** styled Poland China spring and fall pigs from strong, healthy, prolific breeders, either sex at low prices. ROBERT NEVE, Pierson, Mich.

**P. C. BOARS AND SOWS**—large type, sired by Expansion. A. A. WOOD & SON, Saline, Michigan.

**P. C. BOARS**—large type—sired by Expansion 80439 and E. M. F. 83987. Satisfaction guaranteed. R. W. MILES, Saline, Mich.

**Poland Chinas**—The big kind. Write your wants. W. L. PENNOCK, Hastings, Mich.

**LARGE TYPE P. C. HOGS**—Largest in Mich. Boars all sold. A few fall pigs. Also some extra large spring gilts to be bred to two of the best young boars I could buy in Iowa. Come or write. Free delivery. W. E. LIVINGSTON, Parma, Michigan.

**TWO YOUNG TAMWORTH BOARS FOR SALE**  
T. F. MARSTON, Bay City, Michigan.

## CHOLERA PROOF HOGS

I keep from 4000 to 6000 grade Yorkshire, Poland China and Tamworth cholera immune hogs and am selling prolific brood sows and thin shoats at prices that make them desirable on cholera infected farms. Will furnish open sows or those bred to cholera immune boars. I expect to have several thousand pigs for sale next Spring from immune stock.

**ALVAN BROWNS PIG FARM, Grand Rapids, Mich.**

**LARGE YORKSHIRE SWINE**—Pairs not akin. Sired by Canadian bred stock. Geo. S. McMullen, Citz. Phone, Grand Ledge, Mich.

**LARGE** Yorkshires—Choice breeding stock, all ages, not akin from State Fair prize-winners. Pedigrees furnished. W. C. COOK, R. 42, Box 22, Ada, Mich.

## Lillie Farmstead YORKSHIRES.

A splendid lot of fall pigs at reduced prices, pairs and trios not akin. Young sows and gilts bred for April farrow. Your money back if you are not satisfied.  
**COLON C. LILLIE, Coopersville, Mich.**



## PRACTICAL SCIENCE.

### FIBER AND IRON IN THE FOOD OF MAN.

BY FLOYD W. ROBISON.

It is recognized by physicians that quite a large per cent of the diseases of mankind, is primarily due to faulty nutrition. It is, I think, quite well established that the character of the food of man should depend somewhat upon the nature of his daily work. In the feeding of animals this principle is adhered to and is considered, in this field, a sort of rudimentary precept. The unscientific boy on the farm will not give the same character of food to the horse, idle in the stable, that he gives to the one working in the field. He recognizes, consciously or unconsciously, two points—one being that the idle horse does not need such a concentrated food as the one working, because the demands on his system are not so great—the other, that the inactivity of the animal makes it dangerous to feed a highly concentrated ration. These two considerations are practical ones with the farmer.

In the human diet, while unconsciously recognizing the one, we almost totally disregard the other. In fact, it is more frequently the case that the person doing the least amount of muscular work is the one who eats the most highly concentrated foods. In the cities it is not the working classes who live on the most nutritious or most highly condensed food, but banker, lawyer, merchant and business man—the one whose life is made up more of mental than of muscular activity.

Reasoning from the standpoint of the animals, which is, it seems to me, a logical one, the man who is doing the greatest muscular work is the one who needs the most highly concentrated and most nourishing foods. It is the person who does the least muscular work and on the other hand a great deal of mental work who suffers most from gastro-intestinal troubles, and I have frequently known a sufferer of this class to be greatly benefited by a vacation which contributed brisk muscular exercise.

In view of these and other considerations, which in this short article cannot even be touched upon, it has seemed to me that we have gone, perhaps, a little too far in our zeal for a condensed and concentrated human food.

A, by no means unessential, function of the stomach and intestines is their peristaltic action, by means of which, their food content is moved about continually and forced onward. To say that this contributes to the utilization of the food and the elimination of waste is putting it lightly. It is in fact, very essential. A vegetable food not highly concentrated or rather not highly purified is a great aid to this more or less mechanical function of the alimentary organs. No better example, of the tendency in modern manufacture, can be given than that which is the basis of the great flour milling interests. The effort is being made constantly to reduce to a minimum the mineral matter and fiber in the wheat, and a high grade patent wheat flour today contains but from one-fourth to one-half of one per cent mineral matter with a correspondingly low content of fiber or cellulose. This well high perfect process of milling may contribute to the nutritive value of the flour, but we must recognize that there are factors to consider other than the high rate of digestibility. The fiber in the food has a distinct office outside of its nutritive qualities. In fact no particular nutritive value is claimed for fiber or cellulose, but it favors the onward movement of the products in the alimentary canal and thus is an indirect aid to nutrition.

A bulletin recently issued by the United States Office of Experiment Stations emphasizes in a marked degree the statement that white wheat bread is more digestible than whole wheat bread, and in fact devotes considerable space to these deductions drawn from actual human digestion experiments. It has seemed to me that the whole subject is little short of an axiom for while there has been little work done, in human nutrition, on which to base conclusions, at the same time enough has been accomplished in the study of animal nutrition to lead one to infer with considerable accuracy that the result would be what it actually was. It has seemed to me that little doubt could be cast upon the conclusion of that bulletin. However, admitting this, the main underlying point still remains. Some

of the persons who diet upon whole wheat bread may do so because they think it contains more nutriment or is more digestible than white bread. Possibly the majority who eat whole wheat bread may reason in this manner. But, I think, few dietists have looked at it in this light. The mere fact that white flour is more digestible than whole wheat flour has had little weight with them. It explains practically nothing. There is an effect—mechanical, physical, chemical—call it what you will, outside the realm of digestibility that claims for whole wheat bread a high place in the human dietary, a place in some instances above white flour bread. This effect is not due in any way to the large or small amount of digestible protein but partially at least to the fiber or cellulose present in the whole wheat bread. Everyone concerned in the feeding of animals knows well the laxative effect, on the dairy cow, of bran and foods containing considerable fiber. There seems no reason to dispute the inference that its effect on man will be in a measure the same. Crowding into the stomach food, which contain no fiber or ballast, even though they are highly digestible, is an evil which, it has seemed to me, scientific men have not sufficiently realized.

Again, the high milling of vegetable foods reduces the quantity of mineral matter and may this not be a point worth some consideration? Bunge has shown quite conclusively how poor milk is in iron, and when we know that white flour contains much less iron than is found in milk, we may infer that the amount of iron the human system can obtain from white bread is exceedingly small. This would not be a matter worth so much attention were it not for the fact that bread is such a staple article of diet and some provision must be made among these regular articles of diet for the consumption of foods that will meet the daily requirements of the body. Analysis shows that, as a rule, the vegetable foods containing a fair per cent of iron also contain a considerable amount of cellulose and thus the two go hand in hand. How much highly concentrated and highly milled vegetable foods contribute to the great per cent of anaemia of the population of cities because of a lack of mineral matter in the food, I do not care to discuss for few definite data are obtainable. Certain it is, however, that a physician would never recommend as a diet for an anaemic person, high grade patent flour bread.

Finally I simply desire to say, that factors of digestibility, while interesting from a scientific standpoint, in the human dietary, at least, are not necessarily evidence of the adaptability of certain articles of foods to human needs. There are other factors, such as mentioned above, that influence greatly the suitability of the food and they may not in themselves of necessity be highly digestible.

#### LABORATORY REPORT.

What is the relative heating qualities of anthracite and bituminous coal, i. e., how much more heat will a ton of hard coal produce than a ton of soft coal? Which is most economical to use as fuel? Ogemaw Co. A. L. D.

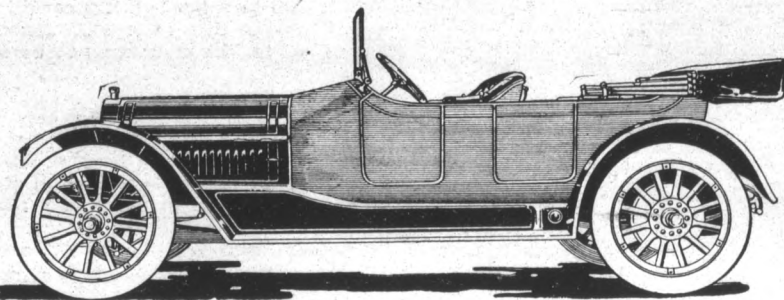
The question raised above is one that has occupied the attention of business men for many years. In most sections of the country wood is no longer a commercial possibility and the use of coal of some kind is absolutely necessary. The approximate values of soft, or bituminous, coal, and hard, or anthracite, coal, are in the ratios of their heating values. Soft coal varies in heating value from 8,000 to 15,000 units, whereas hard coal is much more uniform, with a heating value of approximately 14,000 units, much depends upon the ash content. The higher the ash content, the lower the heating value. Generally speaking, hard coal has a higher heating value per ton, but its cost more than offsets this advantage.

Soft coal, of good quality, is much more economical than hard coal. Soft coal is not so pleasant to handle because it does not as a rule, burn so completely in the ordinary stove and the carbon in the smoke settles on everything near the house. It is especially trying when the housewife has a full line of clean clothes. It is also less clean to handle.

There are stoves, however, which burn soft coal so completely that there is

(Continued on page 545).

# Mitchell



Mitchell 1913

The New 1913 Mitchell is beyond all question the best automobile for you to buy!

YOU know pretty well what you want, and we have learned by 78 years' experience that you want the best vehicles that money will buy, without wasting a dollar of the money. That's a Mitchell car for you.

The 1913 Mitchell is the wonder of the year; a marvelous combination of the handsomely finished city cars, the swift and powerful cars for tourists, and as easy to manage as the simplest electric. (Prices \$1500, \$1850, \$2500—worth double!)

#### Electric lights and electric self-starter!

These are great advantages, the electric lights are tremendously powerful; show up every bad spot in the road for five hundred feet ahead. Battery kept charged by generator. The electric self-starter saves all the labor and annoyance of cranking the engine, and adds greatly to your comfort and safety; keeps you out of the cold, wet and mud, and makes it possible for the women and boys to start the motor and drive the car.

All Mitchells, like most of the very high-priced cars for 1913, have the new long stroke, T-head motor; the newest thing for increased power and high efficiency.

Powerful—all the horse-power claimed for them. Simple—you and your boys will easily understand the entire "works" very quickly. Economical—they don't cost much to run. Handsome—nothing has been spared that would add to their appearance.

There's nothing too good to be used in the Mitchell; it has all the new improvements, everyone of them. Also the same high-grade workmanship and material that have gone into Mitchell vehicles throughout the past 78 years.

You won't find any other medium-priced car that offers anything like the advantages of the Mitchell—a \$1,500 car in the \$5,000 class. You can't beat it at any price. You can't equal it at anything like the price.

#### All with T-head Motor and 36-inch Wheels

		Wheel Base	Stroke	Price F. O. B. Racine
7 passenger Six	60 H. P.	144 in.	4 1/4 x 7 in.	\$2,500
2 or 5 passenger Six	50 H. P.	132 in.	3 3/4 x 6 in.	1,850
2 or 5 passenger Four	40 H. P.	120 in.	4 1/4 x 7 in.	1,500

DEALERS EVERYWHERE

**Mitchell-Lewis Motor Co.**

Racine, Wisconsin

M. A. YOUNG, 754 Woodward Ave. Detroit, Mich.



## THE DAIRY

CONDUCTED BY COLON C. LILLIE.

### FEEDING YOUNG CALVES.

How can I raise calves on skim-milk? What feed should I use and how much should be fed with the milk? Have used some of the calf meal.

Barry Co.

L. F. F.

The prepared calf meals on the market were designed to be fed where no skim-milk is used. The idea was to furnish dairymen who sell whole milk for city consumption as market milk with a ration which would take the place of this milk, and so the calf meal theoretically is compounded to give the calf a complete ration in place of the whole milk. In other words, it is designed to be a substitute for whole milk. People usually don't think it necessary to take any considerable pains in feeding grain with skim-milk because skim-milk is considered a good ration for the calves. But when we think about the matter we realize that skim-milk is not a good ration for young growing calves. Whole milk is a splendid ration. It is nature's food for the calf, but when we run the whole milk through the cream separator and take out the butter-fat we have thrown the ration out of balance, and calves will not do well upon pure skim-milk because it doesn't contain enough fat. Now, what we want to do is to furnish, if we can, some grain that is rich in fat to take the place of the butter-fat which has been removed, and keep the ration balanced.

Whole milk, that is, the milk before it has been run through a separator, contains a nutritive ratio of one to four, or thereabouts, that is, to every pound of protein that is in the milk there are four pounds of carbohydrates. Now that is nature's balanced ration for the young growing calf. When we skim this milk take out the butter-fat, then we have a ration with a ratio of one to two; that is, one pound of protein to two pounds of carbohydrates. Now you can see that taking out the fat throws this ration for the young calf decidedly out of balance. Instead of having a ration with a nutritive ratio of one to four, we have got one with a ratio of one to two, and it is our business, if we can possibly, to put something into this milk for the calf which will bring this ration back to its normal balance. If we put in corn meal it doesn't do it, although corn meal is rich in fat, but it also has considerable protein, enough so it does not balance up the ration. We must have something richer in carbohydrates and fat than the milk. If we put in ground oats it is a little better than corn but it is not rich enough yet. If we put in wheat middlings the ration is still better, and yet wheat middlings contain protein and carbohydrates in exactly the same proportion that whole milk does. It would be a complete food in itself and would be practically as good as any of the calf meals to feed in the place of milk, but when we put a complete food like wheat middlings in with skim-milk which is unbalanced we don't balance it. We must have some food that is richer in fat than the skim-milk, and we can go over the whole list of commercial feeding stuffs and we find nothing that will furnish the desired amount of fat in the ration for the calf, and still keep the ration balanced; that is, to keep the proportion of protein to carbohydrates one to four. Some people use oil meal. This is the flaxseed meal after the oil or fat has been taken out of it. But this has about the same proportion of protein and carbohydrates as skim-milk itself, and adding that to skim-milk doesn't balance the ration for the calf. However, if we take the flaxseed meal itself before the fat is taken out, this product has a nutritive ratio of one to five, or one pound of protein to five pounds of carbohydrates, and the beauty of it is that the carbohydrates here are largely in the form of fat because ground flaxseed or flaxseed meal contains 30 per cent of fat. One might argue that corn meal, having a nutritive ratio of one to 10 would be better to mix with the skim-milk, but in it the carbohydrates come from starch and sugar, and we want the carbohydrates in the food for the calf to come from fat because we have removed fat, which is more easily digested than starch and sugar from the calves' milk. And so there isn't any question but what the best substitute for whole milk for young growing calves is skim milk and flaxseed meal. Make the flaxseed meal into a jelly by boiling it in six times its amount

of water. In other words, take one pint of flaxseed meal and six pints of water and boil to a jelly. This will give you a product of about the right proportion. Then begin by giving the calf a gill of this with his skim-milk. Gradually increase it, using your own judgment, to keep the calf in a good thrifty condition.

Now, besides this milk and flaxseed jelly, of course, the calf wants to be encouraged to eat clover hay as soon as possible. It is a nice thing to give them in addition, other grain, like oats or ground oats, or ground barley, or in fact, almost any feed that you have at hand. By giving them first a little handful of it and encourage them to eat it, the more you can get them to eat of this the faster they will grow and the more thrifty they will be.

We also want to encourage the calf to eat a good ration of bulky feed, like clover hay and corn silage. It expands and develops the digestive tract and when the animal comes to maturity it will have greater digestive capacity which is certainly a necessity to large producing cows. The calf that is raised entirely on whole milk or largely on whole milk until it is five or six months old, will not make the feeder, and will not have the digestive capacity that the calf fed a little flaxseed meal with its milk and encouraged to eat more bulky food, because this develops the digestive tract and gives the calf larger digestive capacity.

Now with regard to the amount of skim-milk to feed a calf, I don't think that you ought to give the calf too much skim-milk. Of course, when it is two or three weeks old it depends largely upon this skim-milk and flaxseed jelly for its food, and it should be fed as liberally then as it is ever fed. For an ordinary calf, or, we will say, for instance, for a Jersey calf, which is a small calf, five pounds of milk twice a day is sufficient. It is all it ought to have. Let it get the rest of its food from other grains and from roughage. Larger calves, like Holsteins, of course require more, possibly twice as much, depending on their size. But in every instance it is better to be moderate in the use of skim-milk and encourage the calf to consume a goodly portion of roughage.

### SUCCESS WITH SMALL SILO-FILLING OUTFIT.

Noticing the answer to E. H. on purchasing a private outfit for silo filling, I wish to give my experience along this line. I put up a silo five years ago this fall 12x24 feet and four feet of cement foundation. In 1911 we added eight feet to this, making a total of 12x32 at present, and this fall I was sorry that I did not have eight feet more, for we could not get all of the corn we planted for the silo into it. So don't build too small, is my advice.

Now in regard to owning an outfit for your own use: The first three years we exchanged work with neighbors, and I do say that I was not very well satisfied with results. I never worked harder in all my life than I did while helping my neighbors, in going about three miles to work and staying until six o'clock p. m., then going home and doing all the chores and repeating this for about two weeks. I got tired of it. Also I have had a man engaged to come with outfit, and I would ask him if he could come such a day and I would go to work and cut a lot of corn down on the strength of his promise, then something would surely happen and consequently the corn had to wait; and, of course, there is always a loss when the corn gets too dry.

In 1910 I purchased a five-horse gasoline engine and a No. 9 cutter. By getting the engine second-hand the outfit cost me in the neighborhood of \$250. Now this engine will run the cutter in good shape and blows the ensilage 32 feet without any trouble. Of course, this will not take in a whole bundle at once, but we can run a good load of corn through in twenty minutes, that is, with one man to feed, one man to unload and a boy to cut bands. Last fall we used one team and wagon, but this fall we used two teams and two wagons. We load up both wagons, bring the loads to the machine, and run it through and we find, with myself, a month man and a boy we hired for five days, that we could fill the silo and get one-third more in it (for we refilled several times), put in less hours and we were always at home.

Now, with some of my readers this may sound something on the play order, but with a man who has eighty acres of land and moderate means, and especially one who has the things that E. H. has to contend with, I certainly would not go

out of business, knowing what I do about owning one's own outfit.

Kent Co.

J. C. W.

### A PERSISTENT MILKER.

Bought a cow Sept. 28, 1912. Party did not know exactly when she would be fresh. As she gave about 6 or 7 qts. of milk a day I continued to milk her twice a day until Nov. 10. Then once a day, but did not get her dried up and she dropped a calf Nov. 17, still giving about 2 qts. a day. So far has not come to her full flow of milk yet. Will she ever do so before she is fresh again? Is there anything one can give her to bring her back to a full flow of milk now? She is a grade, (Hereford and Jersey). Milk tests four per cent. Would it be advisable to keep her a year?

Osceola Co.

E. F. C.

A cow that will give milk right up to the time of coming fresh again and not dry up on her own accord, is a persistent milker. These are just the kind of cows that we are looking for. These are the kind of cows that are profitable producers. I am not saying that a cow should give milk continually the year around, but I do say that a cow that will give milk the year around is more apt to be a profitable producer than one that goes dry of her own accord for any considerable length of time. What we want is a cow that is willing to do business the entire year, and will, if allowed to, and then it is our duty to control that cow and dry her off so that she has a little vacation or period of rest before she freshens again. We do this largely for the benefit of the offspring. In all probability a cow should go dry from four to six weeks. This gives her time to make preparation for the coming yield, but the cow that goes dry of her own accord for three or four months is usually unprofitable.

The probability is that this cow will not give as much milk the coming year as she would had she been dried off four weeks before she freshened. That would be but natural. And yet she perhaps gave more milk last year than she would if she had been dried off, so there can be little or no loss. The serious result from a case like this is apt to be upon the offspring. The calf will show less vigor where the dam has not been dry for a certain length of time before she freshened again. But I certainly would not sell this cow. I would feed her well. Give her a good liberal ration. She may not come to her full flow of milk, but she will, I believe, give a profitable flow, and then next year before it is time to freshen, dry her off and give her a nice little vacation. Feed her well all the time and I believe that she will be a profitable producer.

### THE UTILITY OF THE CREAM SEPARATOR IS WELL-FOUNDED.

To add to the list of advantages afforded by the installation of the cream separator on the farm, would probably be impossible. When the farm separator innovation was first suggested conservative farmers all over the country opposed the introduction of the new method of separating butter-fat from milk, with every conceivable argument, and not a single reason for changing to the new, remained unchallenged. The whole ground was canvassed, not only by the farmer, with his crude facilities for determining facts, but by his agent, the experiment station man, who, with laboratory accuracy reviewed again and again the many points brought into question. And what was the result of this thorough analysis of the case? It proved, one by one, that the claims made by the students who advised the use of the separator on the farm, were well founded. Instead of leaving an average of 0.7 per cent of butter-fat in the skim-milk, as was the case with gravity setting, it was shown that the waste could be reduced to 0.01 to 0.05 per cent; it proved that a fresh, sweet cream of uniform butter-fat content could be provided; that there was greater economy of time in caring for the milk, especially where several cows were kept; that the feeding value of the skim-milk was enhanced by reason of its being sweet; that better control over the introduction of tuberculosis into the herd was possible, as compared with the condition where milk from many farms is pooled at the factory and the skim-milk is re-distributed among the farmers, etc. In the determination of these facts every phase of the question, from one end to the other, was carefully gone over by different investigators. That the results were convincing is testified to by the hundreds of thousands of separators on farms in every section where dairying has been closely studied with a view to economical and sanitary production.

Wayne Co.

A. H.



## Makes Backward Cows Profitable

It is good business to watch the health of your cows. Healthy cows give more and better milk, make richer butter and require less care. If you have a "poor milker" or a cow that is apparently barren, *Kow-Kure* will help her resume all her functions and make her thrive on nature's food.

*Kow-Kure* is not a stock food; it is a medicine prepared for cows only. It has wonderful medical properties that aid digestion and remove disease germs from the system. Cow owners everywhere use this remedy as a preventive and cure for *Lost Appetite, Milk Fever, Bunches, Red Water, Scouring, and for Abortion, Barrenness and Retained Afterbirth.*

Your feed dealer or druggist sells *Kow-Kure* in 50c and \$1.00 packages. Ask him for free copy of our valuable publication, "The Cow Book," or write us.

Dairy Association Company

Lyndonville, Vt.



## DE LAVAL CREAM SEPARATORS

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Cut feed from roots, etc. Self-feeding; cuts fast and easy; 7 sizes for hand or power. Low prices. Book Free. Address

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We want distributors in your section to push Owl Brand. Standard for 35 years. Popular because pure and easy to sell. Write for prices and plan. F. W. BRODE & COMPANY, Memphis, Tenn.



# A POOR FEEDER—MERITS OF THE DIFFERENT BREEDS.

I wish to ask your opinion regarding cows. I have just bought a cow, about three-fourths Jersey, three years old. She is very "finicky" about her feed. She won't eat wheat bran unless I put oil meal in it. She won't eat turnips, carrots, or beets. The corn fodder has to be the best and she wants a change every day or two. I have a small amount of good alsike clover hay which she eats well for a couple of days. Do you think she is sick or just "notional?" She was fresh in March and comes fresh again in June, gives about 1½ qts. at a milking, apparently very rich. She had a slight attack of kidney trouble a few weeks before I got her but I think she was always fussy about her feed. Is this a characteristic of Jersey cows, and are they tender? I have been told that Jerseys are too tender for Grand Traverse county. Are Holsteins at all superior to Jerseys for butter cows? I mean on the average. I know that quality lies in the strain, or individual, and not in the breed. I am on a new farm with but small clearing and cannot afford to grow the necessary fodder for cows and horses and want to put up a silo next fall but fear my new cow won't eat silage. I have a half, or less, Jersey cow and a heifer calf also. I want to work up to about eight or ten pure-bred cows of whatever breed I decide upon. Can you give me some idea of the merits of the various breeds?

Grand Traverse Co.

W. F. J.

It may be that your cow is not vigorous, that she lacks in vitality, in other words, that she is not what is known as a hearty animal, and consequently she is not a good feeder nor a good producer. This is not characteristic of any particular breed, but such animals are found in all breeds. It may also be that this cow is simply notional and has got into that habit because her former owner has humored her. She may be a spoiled cow. It may be that she was not brought up right as a calf. This has a great deal to do with the cow's notions about eating. Animals, like children, have to be educated to eat certain new foods. I know of no animals hardly, unless it is hogs, that will take hold of a new food for the first time as they will something they are accustomed to. The probability is that your cow has never been in the habit of eating any bran and consequently at first she does not take to it. The probability is that if she is hearty it will only be a short time before she will relish it very much, and it is the same with ensilage, or any new kind of feed that the cow is not accustomed to.

This trait is very noticeable in chickens. You take chickens where the food is changed from wheat, we will say, to corn. You put corn before them and they will not look at it, they seem to have no desire to eat it at all, and will have to get very hungry, indeed, before they eat it. But after they once get to eating it they find out that corn is good and there is no trouble after that.

Now this is largely so with young cattle. Foods that they are not used to eating they have to learn to like, and it is the same way with people. How many people ever liked celery the first time, or olives the first time they ever ate them. There are many vegetables that we grow to like. Even some people can't get accustomed to eating certain vegetables at all. They don't like them. It is nothing but a notion because, if they would keep on tasting them they would soon learn to like them just as other people do, and this is the way with cattle. Now, in bringing up a calf he ought to be fed a variety of foods that he may get into the notion of eating anything that is set before him. It is all nonsense to bring up a good healthy calf so that he won't eat the common foods which are to be fed to him afterwards. But, on the other hand, if the calf is naturally delicate it will not be a good feeder anyway.

No, this is not characteristic of Jerseys. A good, healthy, vigorous Jersey is as good a feeder as you will find anywhere. They will eat anything and seemingly about all that you care to give them. Breed has nothing to do with this. Years ago when I built my first silo we had to teach the cows, nearly all of them, to eat silage. They didn't know what it was. They didn't seem to like the smell of it, nor the taste of it. Some of them even wouldn't taste of it at all, but now we have no trouble, because even the young calves when they are a month old are given a little silage and there is no trouble about their ever refusing it.

With regard to the merits of the different breeds of dairy cows. I believe that I am liberal minded enough to discuss them on their merits without any prejudice whatever. I have said a great many times that I didn't believe there

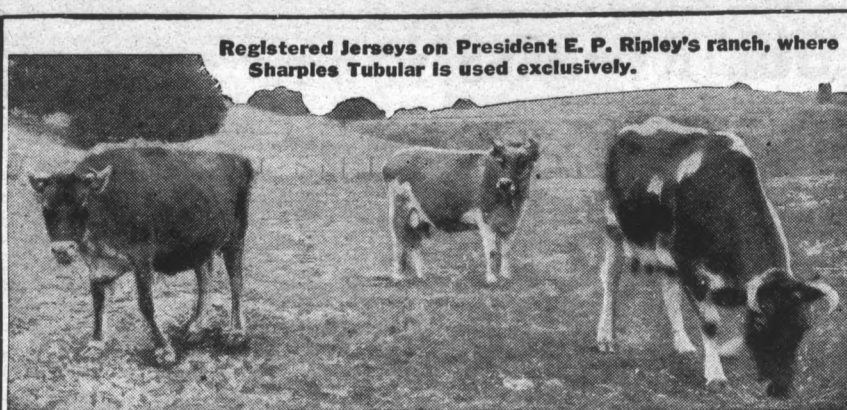
was difference enough between the four leading breeds of dairy cows, namely: Jerseys, Guernseys, Holsteins, and Ayrshires, so that a man would make any mistake if he selected the breed which suited his fancy best. If a man likes a Jersey cow better than he does the other breeds then I should say, take the Jersey cow. On the other hand, if he likes the Guernsey best, the Holstein best, or the Ayrshire best, then select the one that he likes best, because he is more liable to give this breed better attention than he will one that he likes less. And while the different breeds have their characteristics, on the whole there isn't so very much difference in their value as producers of dairy products. The Holstein cow gives much more milk than the Jersey, yet this milk is not so rich in butter-fat, and consequently 100 lbs. of Holstein milk is not worth as much as 100 lbs. of Jersey milk. And so the Jersey doesn't have to give as much milk to have her product as valuable as the Holstein. All four of these breeds have been bred and selected for generations for the sole purpose of taking food which the farmer produces upon his land and converting it into dairy products at the greatest profit. Years ago when I made my selection the Holstein cow was not as prominent or so widely distributed as she is now. Very little was heard of her in this country. Since then, of course, they have been increasing in popularity. There is room for all the dairy breeds in this country, and yet I see no reason, as a dairyman, in making a change. I am confident that the Jersey cow will take the food which I produce upon my farm and make it into dairy products as economically as any dairy animal that can be found. I am warranted in saying this from the records of Co-operative Cow Testing Associations and the records of public dairy tests, and the records of private dairy tests. I am aware that there are Holstein cows that have produced more butter-fat and many of them have produced more milk than the Jersey, and yet this does not settle the question. The question is, which cow will take a dollar's worth of food, and make the most out of it? Or, in other words, which cow will give us the largest value in dairy products from a dollar's worth of food? Or stated in still another way, which will produce dairy products the most economically? A Holstein cow, being a larger machine, will consume more food and produce a larger amount of dairy products. But this is no sign that she is the best cow for a farmer to own. Economical production is the final test. If the Holstein cow will produce most economically she is the best cow, if the Jersey cow will produce the most economically she is the best cow, and so with the other two dairy breeds. You will find unprofitable cows in every breed, and you will find excellent cows in every breed. There is a great difference between individuals of the same breed, but there is very little, if any, difference between the average run of the different breeds.

## FAVOR STATE-WIDE TESTS FOR TUBERCULOSIS.

Large milk producers supplying the Grand Rapids trade met in that city on November 30 and voted in favor of a state-wide law requiring frequent tests of herds for tuberculosis and also a law governing importation of cattle, similar to the laws in effect in Wisconsin and other states. Dr. Elzinga, a veterinarian, declared that Michigan is a dumping ground for other states. Dr. Elzinga advised the use of the inter-dermal test, though in the case of cattle shown by this test to be tubercular he advised also the use of the temperature test to make sure. The new milk ordinance adopted by Grand Rapids has many requirements, including the tuberculin test of herds, and the milk producers there feel that they should get 20 cents a gallon, instead of 14 to 16 cents as at present.

J. H. Skinner, farm demonstrator for Kent county, urged the dairy farmers to know what their milk is costing them as the first step toward setting a price on it. He finds silos going up all over the county and says that milk cannot be produced profitably without silos. The need of more alfalfa fields was pointed out and next year, working under government direction, demonstration areas of at least an acre will be started with alfalfa in each of the 24 townships of the county. The feeding value of alfalfa is equal to that of bran, pound for pound. Kent Co.

A. GRIFFIN.



Registered Jerseys on President E. P. Ripley's ranch, where Sharples Tubular is used exclusively.

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Disks from separator discarded for Tubular.

Do you know any keen dairymen, business men or professional men who knowingly miss extra profits? Such men have common-sense reasons for what they do. They do not act in haste or with their eyes shut.

We could fill books with the names of such men who have chosen Sharples Dairy Tubular Cream Separators in preference to all others. Why? Because dairy Tubulars contain no disks to chop, taint or give cream a metallic taste; and because Tubulars have twice the skimming force of others, skim faster, skim twice as clean, and thus pay sure and easy money that is simply extra profit over what any other separator can pay.

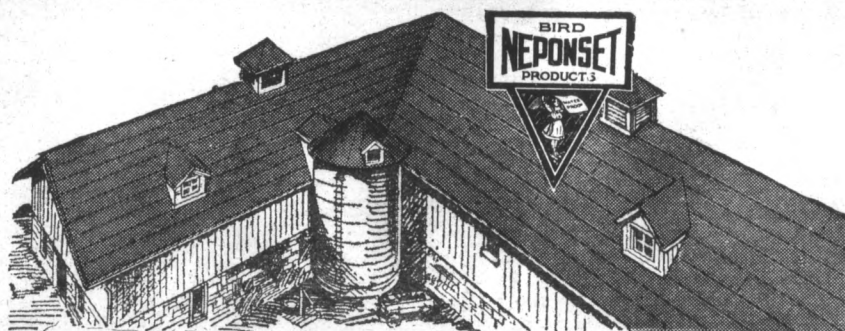
Mr. E. P. Ripley, keen, sagacious, well known president of the great Atchison, Topeka & Santa Fe Railroad, is but one of many such. The Tubular is used exclusively to skim the milk from the registered Jerseys on Mr. Ripley's ranch at Santa Barbara, California.

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Only piece inside dairy Tubular bowls.

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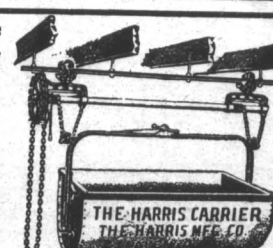
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## POULTRY AND BEES

PROMOTING EGG PRODUCTION.

It is not as impossible as experience might lead one to believe, to secure a continuous supply of autumn and winter eggs without artificial stimulation of any sort; but it needs knowledge and good management. In the first place, a knowledge of breeds and their peculiarities is essential. Broadly speaking, none but the large, loose-feathered varieties are naturally good winter layers (fifteen or twenty years ago no breed could excel the original Langshan in this respect), and, as they are also slow maturers, pullets must be hatched in late January, February and March to ensure egg production from September onwards. Then strain has much to do with prolificacy, and it is important to use, for hatching, the eggs of individuals which have laid during the desirable period if the quality of producing eggs at unnatural seasons is to be perpetuated.

Comfortable houses, not necessarily warm in the southern districts, but well ventilated, light, and sunny in aspect, with a comparatively dry run, are also factors. Some experiments were made years ago by a friend of mine with the object of ascertaining what influence, if any, a dry and a wet run had on the prolificacy of pullets. Nearly related fowls of approximately the same ages were segregated into two lots, the one being placed in a large, airy house with a run into a small, dry gravel yard, the other being similarly housed and treated, but allowed to run into a grass paddock. The fowls in the dry yard not only thrived best, but proved very much more prolific than their relations, and their owner was fully satisfied, at the end of his investigation, that to keep the feet of his fowls dry was an important factor, both in promoting early fecundity and in ensuring a continuous supply of autumn and winter eggs.

It seems to be very generally recognized that a morning feed of meal, stiffly mixed with hot water, is very much better than a similar mixture fed cold. This one can well understand; also the necessity of incorporating in the ration some kind of animal food, such as cut bone, chopped liver, or butcher's scraps two or three times a week at the season when natural insect food is unobtainable.

The use of peppery foods and spices to stimulate the egg-producing organs to an abnormal state of activity is a course often recommended by vendors of such products, and is one frequently adopted by the owners of unprolific hens. There is no doubt that the articles in question sometimes seem to fulfill their purpose, though whether they will actually stimulate the really immature fowl into full reproductive activity is certainly open to question. If a pullet is on the point of laying, a slight stimulation may induce the completion and deposition of the ova; but there are probably articles more natural and less likely to be harmful to the digestive organs than peppers and spices, which will have the same effect.

Mowbray, in his Treatise (1824), makes the following suggestions: "To promote fecundity and great laying in the hen, nothing more is necessary than the best grass and fair water; but malted or sprouted barley has occasionally a good effect whilst the hens are kept on solid grains, but if continued too long they are apt to scour. Cordial horse-bait is good to promote laying in cold and damp weather, in place of some of the water with which the morning mash is mixed, and seems to stimulate the birds without causing any lasting or undesirable effects."

The French recommend buckwheat, corn, "seconds" wheat, hemp seed and oats to promote laying; they also have a theory that barley augments the volume of the yolk, while rye favors the development of the white.

Canada. W. R. GILBERT.

### WHEN ARE EGGS FERTILE?

In a test made by the Maryland station to determine the time required for eggs to become fertile after a male has been added to the breeding pen, 20 single comb White Leghorns, housed without runs, were kept from the male birds for three months. A cockerel of the same variety was then added and on the fourth day following 10 eggs were laid, seven of which were fertile. In another test, using 18 Rhode Island Red pullets and one White Plymouth Rock cockerel, four eggs

were laid on the seventh day and all were fertile, six were laid on the eighth day, three being fertile. In another test, using a pen of the same breeds, eight eggs were laid on the eighth day, all being fertile. These tests, while not conclusive, seem to indicate that it is safe to save eggs for hatching from a pen of Leghorn hens after the male bird has been in four days. In the case of the larger or general-purpose fowl the results show that possibly a longer period should be allowed to elapse, seven days being the time in this instance, where Rhode Island Reds were used. It is possible, however, that the crossing of the breeds may have had something to do with the longer period.

### IN ANSWER TO INQUIRIES.

#### Another Case of Roup.

My chickens' eyes get sore, finally swelling until they become blind and then die. They have a good large coop and I feed corn, wheat, oyster shells and water.

Ottawa Co.

B. S.

It seems reasonably certain that your fowls have roup, which appears to be quite prevalent this fall, from the number of inquiries received. This trouble begins with an ordinary cold induced by subjecting fowls to draughts or dampness. Its contagious nature and various methods of treating, have been described in these columns many times. Read, carefully, the article on the symptoms and treatment of this disease in last week's Farmer.

#### Leghorns vs. Minorcas.

Which breed is the better egg producer—the Brown Leghorn or the Minorca—or will cross-bred fowls produce better results?

St. Joseph Co.

H. B.

So much depends upon the attention given to developing and improving the laying qualities of a flock of hens that it is difficult to satisfactorily answer a question of this nature. By selection of the best layers, and their retention for breeding, an egg-laying strain of almost any breed can be developed which will surpass in production ordinarily good flocks of supposedly better laying breeds. Leghorns and Minorcas are both members of the special egg-laying class of breeds and, as a general proposition, we believe there is little choice between them. In the great international egg-laying competition, recently concluded at the Storrs experiment station in Connecticut, first honors went to a pen of White Leghorns, closely followed by a pen of White Wyandottes. The Brown Leghorns showed a little better than the Black Minorcas but both were pretty well down in the list.

Cross-bred fowls sometimes prove superior to pure-breeds where only one cross is made. Some poultry raisers especially like cross-breeds for market poultry, claiming they secure quicker growth and greater size from crossing good meat or general-purpose breeds. However, the use of the progeny for breeding almost invariably brings rapid deterioration, so it should be thoroughly understood that cross-breeding must stop with the first cross.

### A SERIES OF ARTICLES ON FOUL BROOD.

Foul brood is now found in 19 states and threatens the destruction of bees in nearly every county in some states. Michigan has it in 46 counties, and perhaps in others of the 69 counties of the lower peninsula where all the disease is found.

Of the many who possess bees, very few are well posted on these diseases, their prevention and eradication. For the benefit of Michigan bee owners we have secured a valuable series of articles on this subject. Beginning next week, the articles will present the various phases of the subject as follows: 1. Origin, contagiousness, spread over Michigan and United States, effects upon bees and honey crop, cause of infection and precautionary measures. 2. Symptoms, distinction between American and European foul brood and how to detect them. 3. Foul brood laws of Michigan. 4. Cure of American foul brood. 5. Cure of European foul brood.

The information carried by this series is up to date and thoroughly dependable, the author, Mr. Norman F. Gute, of Shiawassee county, having had experience in caring for bees thus affected in large apiaries in the states of Michigan, Mississippi, California, Utah, Idaho, Colorado, and Illinois.

#### Small Ad. Sold 480-Acre Farm.

Mr. J. W. Towar, Lansing, Mich., who advertised a 480-acre farm for sale, at a cost of \$2.80, writes: "The advertisement found me a buyer for my farm."



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## HORTICULTURE

### APPLE ECONOMY.

The days of bonanza apple growing is past. Within the past few years the apple has received more advertising than any other farm product. "Land and Apple" shows have sprung up like mushrooms in all parts of the land. The apple was always connected with the selling of land on account of the fortunes that have been made out of apples; it sounds better to use big figures with the selling of land. On account of this advertising many have gone into apple growing, and until the methods of marketing are improved and simplified the increased production will decrease the price the producer gets for his crop. Extravagant methods of orcharding could be afforded in the days of big money. Apple economy is a necessity now when apple profits more nearly come to the level of those of other crops.

Apple economy is only scientific management in the orchard. It is the cheapest and most efficient way of doing necessary things. It is knowing what everything costs you in the money equivalent for your time, the time of others employed, material, wear and tear of tools, and interest on money invested for each of the operations of orcharding. Do you know what it costs you per barrel to pick and pack your apples, to haul them to the freight car? What has spraying cost you in time and materials? Do you know what it cost you to repair your spray rig?

A few cents more per foot for ladders that weigh a few pounds less will save dollars in picking. A few dollars spent in providing convenient picking bags will save many times their cost in the time of picking and in bruised fruit. The half bushel basket with its wire (S) hook to hang it on the limbs and the grain sack doing duty as a picking bag are expensive receptacles to pick in.

Ignorance of the principles of a gasoline engine has been expensive to many. It is really surprising how well some gasoline engines will run after the lack of care and abuse they have received. Enormous amounts of temper and time have been wasted on little things left undone in little ways during spraying time when time was precious.

Economy is not always saving but more generally spending so as to save. A little more money put into pruning, cutting down the tops of the high trees; a little more spent on a more abundant and convenient water supply and for better and more spraying apparatus and conveniences; wise investments in handier tools for orchard cultivation and for the harvesting of the fruit would save the fruit growers of this state fortunes.

Common, ordinary book-keeping, that does not require a college education, is the "Babcock test" for all orchard operations. It will show to you which operation is using up more than its share of expense. It will show you whether your trees are bringing you a profit or not, and whether the profit is enough or not.

Buying conveniences for orcharding on your faith that the expenditure will mean ultimate economy will bring to you, nine times out of ten, the knowledge that your faith was not unfounded.

Scientific management is nothing but horse sense properly applied. It can be applied in the orchard as well as in the factory.

Van Buren Co. F. A. WILKEN.

### CABBAGE GROWING.

Among the crops introduced into this locality, (Hillsdale county), in recent years, the one which has proved most popular is that of cabbage growing. This industry, although carried on in various parts of the state, is so localized that the majority of farmers know practically nothing about it. An illustration of this is found in the district of which I write, which is restricted almost entirely to a couple of townships, while farmers in the remainder of the county and in neighboring counties are unacquainted with the industry.

Owing to the fact that cabbage growing has been engaged in successfully here, for a dozen years, and that this was the banner season, it has occurred to the writer that a few words in regard to it would be of interest to many readers of this paper.

In growing cabbage successfully, farmers here have found that the first requisite is good ground. A field which

might produce a fair crop of corn, might still lack the fertility to produce a paying crop of cabbage. Small heads, even though solid, will not be accepted by the kraut makers, and unless the ground is fertile enough to grow large heads, the crop is practically a failure.

In regard to the condition of the land after cabbage has been grown, many farmers in this locality say they can raise better oats after cabbage than after corn. Whether this is due to the fact that the best ground is usually set to cabbage, is, of course, a question.

Concerning the amount of labor expended in growing a crop of cabbage, it is claimed by experienced growers that the work is much less than in the case of corn. The plants are set, for the most part, from the middle till the last of June, and if the ground is plowed early and worked occasionally, previous to setting, the task of cultivating is materially lessened—three times through with the cultivator being usually considered sufficient.

Aside from cultivating, but little work is done in the cabbage field till the time for marketing arrives. Some growers salt the heads to drive away worms, but, as a rule, the worms are left unmolested. A couple of rows of plants around the outside of the field, are generally a prey to these pests, while the remainder of the crop is not injured.

At marketing time, an axe is used to cut the cabbage and a pitch-fork to load it on the wagon. Generally, by the first of November, the crop has been converted into kraut.

A few figures in regard to the banner crop of this season, will be of interest: Something like twenty-five hundred tons of cabbage found its way to the local kraut mill or into the hands of shippers, during the time of marketing. At the prevailing price paid, this amounts in cash, to over twelve thousand dollars. The average yield per acre was 10 tons, with 15 and 18 tons not uncommon. The biggest yield reported was twenty-three tons per acre. This grower sold his cabbage for five dollars per ton, thus realizing \$115 per acre, for his season's work. Many of the farmers who engaged in this industry, this season, are experienced cabbage growers who grow cabbage year after year, and who consider the crop a paying one, nine years out of ten.

Hillsdale Co.

J. A. KAISER.

### ASPARAGUS.

Among the perennials which should have a place in every garden there ought to be room for asparagus. It is easily grown. Any kind of soil will do, if it is made rich enough. The bed once made will last many years if it is given a little care.

To make a bed, prepare the ground as early in the spring as the weather will permit. Cover the ground with a heavy coat of manure. Plow deep and pulverize the soil thoroughly.

Either year-old or two-year-old plants are set. The former are small, so easily transplanted and less liable to a setback from handling. They may not yield as large a return at first, but the difference will be small and the younger plants will soon overtake the older. Usually it is preferable to set the yearling plants.

The roots may be set as close as 12x18 inches, but this is advisable only for the small garden where space is at a premium. For such close planting extra care should be given and the roots should be well fed.

In field culture the plants are set much farther apart, 2x5 feet, 3x4 feet, or even more. The roots will take up all the room, as the plant has a larger underground system. Such wide planting is more satisfactory in the garden than close setting, if there is room.

After the plants are set they should be cultivated often enough to keep the ground mellow and clear of weeds. Late in the fall, after the tops have been removed and the ground has frozen, the rows are covered with manure. This is not only for a fertilizer, but to keep the frost from going too deep. Asparagus is not tender. It will safely endure a severe winter. But a mulch will enable it to start earlier in the spring.

During the second summer cuttings should be taken from the strong roots only, if from any at all. But it is better to let the plants grow uncut till the third year. After that cutting may be freely done.

Asparagus may be raised from the seed, if desired, but it requires a little longer time than to procure the roots from a nursery. The seed is sown in drills 18 inches apart. It should be thin-

ly scattered, since nearly all of it will grow. Sow at any time during the spring, but the earlier the plants are started the better for their growth during the summer. If the seed is soaked in warm water it will be more prompt in coming up. When well started they are thinned to stand three inches apart in the row.

The seed may be planted in hills to form the bed. Such plants, growing where they are to stand, so needing no transplanting, ought to produce a strong bed nearly as quickly as one set with yearling plants. It is a method, however, that is not commonly followed.

The asparagus beetle is at times and in some places, a serious enemy. Young chicks are fond of it and if given an opportunity will do much to keep the insect in check. Spraying with arsenate of lead is also effective. While the shoots are being cut there is not much injury done. The mischief comes later, when the stalks are left to grow.

Asparagus rust is a disease that has become widespread. Affected stalks turn yellow and die in the summer or early fall. On examination black eruptions of the smut or spores will be discovered. Such stalks should at once be cut out and burned. Bordeaux mixture will keep the disease in check. The best prevention is an abundance of available plant food. Applications of nitrate of soda are excellent. This fertilizer has a wonderful effect on asparagus, causing it to produce a vigorous foliage. Some varieties are less liable to injury than others. The Palmetto is among the best as a rust resister.

It is not necessary to give extra large quantities of fertilizers at first, but after the bed has begun to yield shoots it can hardly be fed too much. Few plants can stand as much. Not only barnyard manure, but the commercial fertilizers may be used. Those strong in nitrogen are needed, since the plant is to produce such a large amount of top, and that very rapidly. Wood ashes or some other form of potash are valuable. Slops and soap-suds are good.

Salt, once deemed important, is no longer considered of much value for asparagus. Experiments, however, indicate that it has some virtue. But the plant is not injured by it, even in quantities sufficient to kill grass and weeds.

Asparagus will endure neglect, but that is not to be recommended. The large, succulent shoots yielded by a bed well cared for, compared with the slender, tough stalks from a neglected bed is a proof of the value of good cultivation and generous feeding in the production of this delicious vegetable.

Oakland Co. F. D. WELLS.

### GOOD RETURNS FROM SMALL GARDEN.

That a combination of skill and a small plot of ground can produce wealth to a degree far beyond the belief of the common farmer, is illustrated by the returns from John Hudson's 125x200-ft. garden in Kent county. This plot of slightly over a half acre, besides furnishing vegetables and fruit for a family of eight, produced enough to bring to the owner fully \$200. Among the sales were \$50 worth of fruit, grapes, currants and gooseberries, \$7.89 of beets, \$8.10 of radishes, \$22.12 of carrots and \$52.27 of onions.

Much of the land grew more than one crop during the season. The crop of green onions was followed by late cabbages, and turnips. Beets were removed and the ground was planted to radishes. A planting of endive was made after a good crop of carrots was harvested. Thus by knowing the season best fitted to the different crops as well as the time required to mature them this wide-awake gardener was able to dove-tail the different kinds together so as to increase the output of the garden far beyond the limit of single crop production.

A. L. D.

In connection with the investigations having in view the origination of new types of citrus fruits, a striking new dry-land introduction has been made by the department of a species related to the orange. This is the desert lime of Australia, which is important by reason of the fact that it is a species which will stand frost, bears drought remarkably well, and has edible fruits which, although small, are of fair quality for preserve making.

The Minnesota Academy of Social Science, in session at St. Paul this week, will discuss the general subject of regulating prices of goods and wages through state legislation.

## NEVER TIRES

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DETROIT, DEC. 14, 1912.

## CURRENT COMMENT.

The problem of an adequate labor supply is becoming a more serious one upon the farms of Michigan each year. Only an exceedingly favorable period of November weather has enabled many farmers to secure the bulk of the corn crop and then at a high cost. A bulletin, recently issued by the United States Department of Agriculture on the "Supply of Farm Labor," affords some interesting statistics upon this point. Figures compiled from past census reports show that in 1820, 83.1 per cent of all persons reported as having gainful occupations were employed in agriculture. In 1840 the number of persons so employed had declined to 77.5 per cent; in 1870, 47.3 per cent were so employed and in 1880, 44.1 per cent; in 1890 the percentage had declined to 37.2, and in 1900 but 35.3 per cent of the people in gainful occupations were employed in agriculture.

During this period, however, the number of persons employed in agriculture increased from 2,068,958 to 10,249,651, or five times. This percentage is not greatly different from the figures given in this bulletin for the most important agricultural countries of Europe, although in some of the countries where other industries have not been rapidly developed and where improved machinery has not been largely introduced the percentage is very much higher, being highest in Hungary where 67.7 per cent of the people in gainful occupations are employed in agriculture.

There has, of course, been a rapid increase in the use of labor-saving machinery upon the farms during the last generation. In 1880 the average value of machinery per farm was \$101; in 1890 the value had increased to \$108; in 1890 there was a marked increase to \$131, while from 1900 to 1910 there was an enormous increase, the average value of farm machinery per farm being \$199 in that year.

The increased productivity of human labor, due to the employment of this labor-saving machinery has been great, but hardly sufficient to offset the decrease in the proportion of our people employed in agriculture, which has no doubt been a great factor in the general rise of the price of foodstuffs which has contributed to the increased cost of living, not only in this country but throughout the world.

In summing up the situation in this bulletin, the conclusion is reached that in the future farm labor will not be recruited to any appreciable degree from the cities. It, however, points out that the farmer would not need to get his labor from the cities, if he could hold the country population to the soil, an object which is undoubtedly being pro-

moted in no small degree by the agencies which have operated to relieve the isolation of farm life to such an extent in recent years, together with the increased social activities which these agencies have brought about.

In view of the fact that leaders who will direct legislation in the next Congress advocate a different policy with regard to the Philippines than that which has been pursued since control of this insular territory was assumed by the United States at the close of the Spanish war, we assume that our readers would be glad of first hand information regarding the islands and their people. Upon this assumption we have arranged for a series of articles descriptive of the Philippines and the Filipinos, to be run in our magazine section during the early part of the coming year.

The first of these will appear in the first January issue and should be carefully read as it deals with the location and character of the islands themselves, and is essential to the better understanding and appreciation of the articles which follow. The second of the articles will relate to the people and will naturally be of greater interest, as people are always more interesting than inanimate things. These will be followed in turn by articles on the industries of the country, including agriculture, and are designed to be essentially information articles which will convey to the reader a better knowledge of these distant islands and their people, thus better fitting them to form an intelligent opinion as to the proper course for the country to take with regard to them.

These articles are from the pen of a former Michigan man who has spent many years in the Philippines in the government service and has an intimate knowledge of the country and its people. As above stated, the articles will be strictly information articles to make them of the greatest possible value, and will not be embellished with the descriptions and folklore, which might make them more interesting reading from a literary standpoint but which would not contribute to the purpose for which they are published. In view of the importance of the subject, we bespeak a careful perusal of this series of articles by every Michigan Farmer reader.

In a recently published interview, Prof. R. S. Shaw, of M. A. C., in commenting upon

the high cost of living, after referring to the price being paid to producers of beef, pork, poultry and dairy products, referred to the low range of prices prevailing in the sheep market and called attention to the fact that there is absolutely no justification for the present high range of retail prices in this class of meats.

After referring to the unusually heavy runs of sheep and lambs in the big markets and the comparatively low prices which have prevailed for the live product, Prof. Shaw referred to statistics contained in a communication recently received from the secretary of the National Wool Growers' Association, which referred to the wholesale price of dressed lambs and sheep as quoted by the packers, ranging from six to 11½¢ per pound. Next, taking up the price asked for dressed mutton in the local retail markets, ranging from 14 to 23½¢ per pound, a part of which was supplied by local producers at prices ranging from three to 5½¢ per

pound, live weight, Prof. Shaw reached the conclusion that, while producers now receive an unusually low price for mutton, consumers are paying the usual high range of prices for these products, leaving too large a margin of profit for the dealer.

In summing up the situation, Prof. Shaw reached the logical conclusion that unless relief from this situation comes, notwithstanding the use which is being made of mutton by the packers for canning purposes and to work into sausage, present tendencies will later result in a marked scarcity of sheep and enforced high prices for farmers, dealers and consumers alike in mutton products.

It is difficult to see what immediate relief can be afforded, except through the action of the producers themselves. Where there is so wide a margin between the price of a product to producer and consumer there is opportunity for the working up of a trade in dressed mutton by producers who care to take that method of availing themselves of a larger portion of the consumers dollar. Many city families would be glad to avail themselves of a dressed lamb or a side of mutton if they could secure same at a fair margin above the cost of production and slaughtering, including delivery to them. Producers can easily figure out the profit on this proposition from the fact that from 48 to 52 per cent of the live weight of lambs and wethers constitutes the marketable carcass and that some revenue will be derived from the pelt and other by-products in addition. In the case of fat ewes the percentage of dressed carcass to live weight may run as low as from 45 to 50 per cent. Here is an opportunity for sheep owners to try direct marketing and also, at present prices of mutton, a fat lamb or sheep will afford an economical source of meat for the farm family which will make a much appreciated variety.

## STATE CORN SHOW ANNOUNCEMENT.

The Ninth Annual Corn Show will be held at the Western Normal School, Kalamazoo, January 6 to 11 inclusive.

The giving of prizes in the senior classes have given way to certificates of honor, ribbons and badges.

The Junior class has been divided into three divisions, 8 to 12, 12 to 16, and 16 to 20 years of age.

Many valuable prizes will be given in each class and a sweepstake.

The program will fill four days.

Jan. 7.—Alfalfa growers' experience meeting, led by Mr. A. R. Potts, M. A. C.

Jan. 8.—Juvenile education and junior clubs, led by Mr. W. H. Faunce, Cadillac; Mr. Cary A. Rowland, Kalamazoo county; Mr. Nye, M. A. C. Department of Agricultural Education.

Jan. 9.—Agricultural day. On this day three kinds of Michigan soils will be considered. (a) Prairie soils, led by Mr. Milo Snow, Richland, broad acre plan; Mr. J. S. Bartlett, Kalamazoo, intensive plan. (b) Rolling land, Mr. Henry Whipple, Augusta, broad acre plan; Mr. L. J. Bradley, Augusta, intensive plan. (c) Sandy soils, led by Mr. Osterhout, Kalamazoo county, broad acre plan; Mr. N. B. Beers, Richland, intensive plan.

Mr. Jason Woodman will give in detail an explanation of the prospective work of the agricultural bureau in this county

and make recommendations as to how to co-operate in the work.

Address all communications to L. J. Bradley, Secretary, Augusta, Mich.

## HAPPENINGS OF THE WEEK.

### National.

Nine men are believed to have been killed at Cordova, Alaska, by an avalanche from Copper Mountain, which also carried away several buildings of a development company. Eleven men were buried and but two were removed alive. Several telephone companies in the southwestern states have merged into one large company with a capital stock of \$40,000,000.

The powder house at a quarry at Bellwood, Ill., blew up Monday afternoon. Fortunately, the quarry hands were away at lunch when the accident occurred. The shock was distinctly felt 15 miles away.

Train robbers took \$20,000 in gold from an express car en route from Bakersfield to Taft, Cal.

The money trust committee of the federal house of representatives is in session at Washington. It is indicated that the committee will recommend a law providing for the incorporation of clearing house associations and probably governmental regulations of these institutions.

A 14-inch gun which was being tested at Sandy Hook proving grounds Monday, exploded, but fortunately no one was injured, although fragments of iron weighing almost 1,000 pounds showered on all sides of the men present.

A federal grand jury is now in session in Detroit, considering violations of the oleomargarine law, opium smuggling, counterfeiting, white slavery cases, etc.

A plan for strengthening the naval reserves of this country is under way. The scheme comprehends the use of the crews of merchant vessels, private vessels, members of skilled trades, etc., to supplement the regular naval force and the employment of merchant vessels to enlarge the transport service. The plan is finding general support among shipowners and others directly interested.

President Taft has been petitioned by a number of citizens of California to change the regulations of the Panama Canal to conform with the Hay-Pauncefote treaty.

Plans are being perfected by leading colored people of the country to celebrate the fiftieth anniversary of their freedom next October.

On Tuesday and Wednesday of this week representatives of the progressive party will meet in Chicago to map out a general program looking toward the perpetuation of the party.

Farmers are watching with interest a case before the circuit court of Gratiot county where an action has been brought for damages measured by the loss of a crop, due to poor seed furnished and guaranteed to grow by the defendant. The case is an unusual one and if the damages are allowed, it will give those who purchase seeds hope of recovering damages due to inferior seed stock.

A jury in the circuit court of Allegan county found Oscar M. Auerbach, charged with the shooting of Harry M. Fisher, of Chicago, guilty of murder in the first degree. An appeal will likely be taken as the verdict was based upon circumstantial evidence.

The Michigan liability act is being patronized by a majority of concerns employing many laborers, and according to the commissioner in a recent statement, is effecting a great saving to the state, those injured as well as to employers.

### Foreign.

Great Britain is making formal demands upon Congress to either repeal the act providing for the free passage of American coastwise vessels through the Panama canal, or for the submission of the question to arbitration.

The status of political affairs in Mexico appears to be alarming to the present administration. So uncertain and unstable is the condition in several states that the government is apparently powerless to restore order and protect peaceful citizens in their homes and at work and so the offices of the church, set in motion by a papal decree, have been invoked to ask for Divine intervention. To this end a midnight mass was begun in every Catholic church in the republic Monday night.

Recent information from Constantinople describes terrible massacres by the Turks in Gallipoli of the province of Adrianople. Six Christian villages were sacked by the troops, the excuse for the murdering and pillaging being that the inhabitants had interfered with telegraph lines.

The action of Greece in refusing to join with the Balkan states in suspending war operations till terms of peace might be considered between the allies and Turkey now appears to be better understood. It was at first thought that the old differences between Greece and the other states to the north had reappeared and were breaking the compact entered into to drive Turkey from Europe. But the explanation now held is that by Greece's refusal to join in the armistice she prevents Turkey from making use of the delay by strengthening her position. That Greece is affecting this purpose is proven by her occupation of Syrakon and St. George, only about four hours distance from Janina where the remnants of the Turkish Monastir army are thought to be.

The third annual meeting of the Northern Nut Growers' Association will be held on December 18-19 at Lancaster, Pa. Headquarters will be at the Hotel Wheatland. Papers will be read by Dr. Robt. T. Morris, Mr. T. P. Littlepage, Prof. E. R. Lake, Prof. C. P. Close, Mr. Clarence A. Reed, Mr. W. N. Roper, Mr. J. F. Jones and other prominent persons connected with the nut-growing industry.

## Kindly Give This Your Attention.

Look at the little pink name label on this copy of The Michigan Farmer. If, after your name, you find 1Jan3 or 1Jry3 it means that your subscription expires on Jan. 1, 1913, the issue of Dec. 28 being the last you would receive.

You realize that a good weekly farm paper is a necessity to the up-to-date farmer. The Michigan Farmer is best for you because it is the only weekly Agricultural and Live Stock Journal devoting its columns exclusively to Michigan territory. Furthermore, at the new reduced rates it is the lowest priced weekly farm paper in America. Quality and Price being right, your renewal is warranted.

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## A STATE FAIR ESSAY.

BY DON WALDRON.

The Boys' State Fair School is launched, and although its trial voyage was rather stormy, the boys seemed well satisfied with it. I think they appreciated the efforts of Mr. Swift, Mr. Field and Mr. Sattler for our happiness and welfare.

I reached the State Fair grounds Monday p. m., registered and went through the auto building where the prime skill of auto engineers could be found.

The Oakland Company had a large exhibit of touring cars and silver cups they had won. The Hupp, Hudson, Studebaker, Buick, Rambler, Maxwell and Chalmers were also there, from roadsters and touring cars to motor trucks. The Kalamazoo, Patterson & Co., and Columbia buggies were shown. Each year sees the buggies more patterned after the autos. The Larkin Company occupied one corner with their goods. There were several old autos on show. A Packard Model A, built thirteen years ago and still in use, and a Pacific Model F built in 1903, an E. M. F. 30, name, "Longhorn," by reason of a long pair of steer's horns killed in a head-on collision. This machine, owned on a ranch, ran 45,000 miles without overhauling, and then able to go 40 miles per hour. A Regal, the first auto to cross from Atlantic to Pacific in less than 30 days. An Abbott Detroit having a record of 100,000 miles.

The new dairy building contained a fount of education. A case of tuberculated meat showing small blotches of yellow tubercular germs, surrounded by a white ring of body cells trying to starve the tubercular germs out, (which is the only way of killing these germs). If the body is weakened it can less successfully combat it, letting it spread until it so infects a part as to cause it to break down with a hemorrhage. A model of a sanitary milkhouse and its equipment was shown. The De Laval and Sharples Cream Separator Co.'s had a large show. Leon G. Wheeler and Chaney Nichols occupied the northwestern part with exhibits of strained and comb honey, longitudinal sections of bee hives and supers showing the bees and their living habits. The Pure Food Department had an exhibit well worth noticing. The state spent thirty-six thousand and sixteen dollars for pure food and one hundred and sixty-eight thousand for military purposes last year. The high cost of living was explained. We buy too much meat and package breakfast foods. At ten cents per package for corn flakes, corn meal costs \$320 per ton. Plain oatmeal and cracked wheat are very good and cheap. Pound for pound whole milk has greater food value than beefsteak and costs one-half as much. Potatoes are our most valuable food, being cheap, easily digested and of great nutritive value. The potato as a food for biliousness, rheumatism, gout, arteriosclerosis is very valuable.

This department destroyed 68,000 bottles of pop, etc., sweetened with saccharin. It was surprising to see the amount of flavoring made with alcohol and some strong adulterant for the flavor. They found linseed oil adulterated with petroleum as follows:

National Linseed Oil Co., Cleveland, O., 20 per cent; Standard Oil Co., Cleveland, O., 12 per cent; American Oil Co., Cleveland, O., 45 per cent; South States Turpentine Co., Cleveland, O., 15 per cent; Garfield Paint Co., Cleveland, O., 35 per cent; Globe Refining Co., Cleveland, O., 40 per cent.

Adjacent to the dairy building was a small barn of cows on a competitive test. They were milked with a machine, their food and products weighed. A talk was given on the building of a dairy herd and it was said: "Although our cows are good, our method of raising calves is base. They being often irregularly fed with sour milk which, causing scours, is likely to permanently ruin their digestive tract. We never think of raising lambs, pigs or colts that way."

The horse barns were well filled. The Bell Bros., having a large show of Belgians; George Ackerman, of Hackneys and Clydesdales; C. C. Judy, Illinois, of fancy saddle horses, mules and Shetland ponies; French Bros., of draft horses; Chas. Bunn, Illinois, imported Hackneys and Shetland ponies. The judge gave us some pointers on horses. The draft breeds are characterized by a plump, round, massive body and thick neck. The shoulders upright, having a place for the collar. The breast should be wide, the legs clean-cut and the front ones wide apart. The foot should be large and round and dark colored. A road horse

should have a lean neck, lithe, active body, high flank, shoulders long and sloping. The body should be deep up and down, front feet close together, toes not out, rather straight hoof, somewhat narrow and dark colored. The saddle horses should have a smooth, short back, high withers, thick in the ribs, and be smooth-riding. The other points should follow the road horse.

The angle of the pastern is important. In front it should be of an angle of about 45 degrees. In the draft breeds it may be more erect. The angle behind should be about 60 degrees.

The cattle barns were well filled. A long row of Jerseys from Hood, Lowell, Mass., won many firsts. N. W. Wagner won a majority of firsts in Shorthorn cattle; J. H. Miller, of Indiana, in Polled Durhams; Reed & Knowles, F. E. Eager & Son winning out first in Holsteins. George Inelchen & Son had a large herd of Red Polled cattle, winning nearly all firsts.

The hog barns were not all filled but there was a good show, especially of Duroc-Jerseys, Tamworths, and Berkshires. The Tamworths resembled elephants. Those standing well on their feet, lengthy, having good hams and shoulders captured the pork prizes.

The quality of sheep was good. There being several exhibits from Canada in the Shropshire class made competition sharp. F. A. Harding coming off with the most firsts. In the Lincolns J. C. Lethbridge & Son won most firsts. F. A. Harding again coming to the front in Cotswolds with all the firsts but one.

The main building was filled. The Tular Envelope Company had a machine made of metal, which automatically turned out envelopes as fast as the operator could bind them into bunches. Cigars from raw to finished product were shown. The cigar was made by taking strips of leaf of about a cigar's length and rolling them up in a leaf. It is then rolled under the palm of the hand on a board. It requires less than a minute for the making. A Ford auto was made during the week in the building. The R. C. H. Co. showed an auto in the rough and the making of some parts. The Cass Technical School had a large show of manual labor articles, from work shop to finished product. The Detroit-Alaska Knitting Company demonstrated sock knitting with a machine which automatically changed color of thread and made the foot. The Scripps Motor Boat Company showed an engine, a new motor boat and an old Scripps, with which Capt. Larsen went through the Niagara Rapids. The Bush & Lane Piano Company and Grinnell Bros., had a fine display of pianos, and put up several.

The Horticulture Building was filled to the limit. W. B. Brown occupied much space with flowers. The fruit on exhibit was mostly apples, grapes and pears. The county exhibits were around on the walls, Berrien county winning first, Oceana county second, Grand Traverse county third, winning the silver cup as permanent, Oakland county fourth, Jackson county fifth, Kent county sixth, Washtenaw county seventh. The Monroe Nursery, Michigan, Orchard Co., Sanilac and Charlevoix counties also exhibited. The individual competition plates were arranged alphabetically on low tables in the center so, with the wall exhibits, everything could be well viewed.

In the Agricultural Building the West Michigan Development Bureau had a nice and large display of apples. It had a signboard comparing the relative cost of producing apples in the west and here, proving Michigan to be in the lead by far. The Upper Peninsula Development Bureau, Northeastern Development Bureau, Ingham county and Grand Traverse county had exhibits of small grains, both in sheath and berry, vegetables, grasses and some fruit. There was but little corn on show.

There was a Western United States and Canadian Agricultural exhibit under the grandstand, showing some fine grain in sheath and berry, legumes and some fruit in alcohol.

The United States Navy had some models of the United States war ships, Maine, Salem, Oregon and Florida, two torpedo boat destroyers, a submarine boat, Holland, which attracted considerable attention.

The machinery department was interesting, covering two or three acres. The saucy puffing of gasoline engines could be heard everywhere. There were many two-cylinder machines. The Rumely Oil Tractor Co., the Pitts, Advance, Huber, and Port Huron Thresher Companies, had a show of engines, bean huller, clover

huller and corn huskers. A stone crusher and good roads construction were in operation. The I. H. C. demonstrated gang-plowing. There were many silos and silo fillers and considerable farm machinery.

The German Kali Works, located next to our tent, showed samples of crude potash and in its different forms, as Sylvinit, containing sixteen per cent potash, kanit about twelve per cent, muriate and sulphate each about fifty per cent. Potash is most valuable on sandy soils and by pictures in the building of it the benefits were proven.

We went to Belle Isle, Friday, a. m., via a Woodward avenue street car as far as it went, and walking to the river, boarding the steamer "Promise," which took us to the Island. We walked around the grounds, first visiting the aquarium. There were white, toad, cat, trigger and surgeon fish, sturgeon, perch, trout, loggerhead, lane and dog snapper, red gopher, sea horses, eels and seals. In roaming around the grounds I saw in pens, or cages, owls, swan, wild geese, ostrich, Canadian lynx, prairie dogs, otter, alligator, polar, black and brown bears, raccoon, buffalo, white and mule fallow deer, California sea lion and timber wolf. There are about 700 acres in the grounds. It is all sodded over, and kept lawnmowed, except the fine roads, which are paved. There are many trees, mostly elms. We came back on the large boat, "Britannia," marched up the sidewalk and those not staying at the Y. M. C. A. boarded a street car for the fair grounds.

Prof. French gave a short talk on the importance of work. Agriculture was an occupation that was becoming important as the town population was increasing and the rural decreasing. Schools of agriculture are being established and the time is coming when their importance will cause many more. The educated farmer is more likely to remain on the farm, as he can obtain better results and, knowing the why and wherefore of things, lives in a happier state of mind.

The well-fed hog is comfortable, so may an ignorant farmer be. The educated farmer can not only afford, but appreciate luxuries. His definition of success was, "Preconsistent, systematic application to what you aim at, makes success."

I learned countless things through experience and observation. I saw the airship rise, fly and light, I found out something of traveling and sweeping. I saw the fireworks, representing the fall of Mexico, with numerous other set and air pieces. I saw binder twine made, the unwoven fiber being led over an endless chain into a small revolving thing shaped like two saucers put together rim to rim and coming out onto a spool as binder twine.

The night horse show, with the high-stepping coach, saddle and hackney horses, roadsters, vehicles glistening to their limit, coupled with the strains of music, were enough to make the eyes of any country youth "stick out" and his heart to beat with joy.

The above essay, submitted in competition with others by the boys participating in the Boys' State Fair School, was awarded first prize by the judges, as attested by Supt. Sattler, of the School. The prize won by the writer, Don Waldron, of Ionia county, was one-half payment on an R-C-H auto, given by the R-C-H Corporation, of Detroit. Other prize essays will be published in future issues.—Eds.

## LABORATORY REPORT.

(Continued from page 539).

very little soot, or carbon, in the smoke, and where they can be used, the soft coal will be found as a rule, more economical.

In the cities hard coal is the rule but in the country homes much soft coal is used, although when a nice coal stove is placed in the house, it usually burns hard coal.

Soft coal is cheaper.

Hard coal is cleaner and nicer to handle, and will please the lady of the house more.

FLOYD W. ROBISON.

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## Michigan Farmer's Club List.

For the benefit and convenience of our subscribers we have arranged the following list of papers on which we can save them money. Besides the money, they save the trouble and expense of sending each order separately.

**EXPLANATION**—The first column is the regular subscription price of the other papers. The second column gives our price for a year's subscription to both the other paper and the Michigan Farmer. The third column gives the price at which the other paper may be added when three or more are ordered. If a price is not given in this column ask us. Example: We will send the Michigan Farmer and Detroit Semi-Weekly Journal for \$1.15. If, for instance, McCall's Magazine also is wanted add it at 40c making total \$1.55. Any number of papers may be added at third column price if they are for a subscriber to the Michigan Farmer.

If you want the MICHIGAN FARMER THREE YEARS and the other papers one year add 75c to the second column price. For the Michigan Farmer 5 years add \$1.50. We do not send samples of other papers. Address the publishers direct.

Send all orders to the Michigan Farmer or through our agents.

We will take your order for any publication you want whether listed or not. Write for rates.

**NOTE**—So long as a subscriber is on our list for one or more years he may order at any time for publications at third column price. So that a three of five year subscriber does not lose the advantage of the reduced price if he wants any other paper next year or the year after.

Subscriptions ordered to Canada require postage. Write for rates unless postage is known, in that case include with order. Postage on Michigan Farmer alone to Canada is 1 cent per week.

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News Saginaw.....	2 00	2 25	
Tribune, Bay City, Mich.....	2 00	2 25	
Blade, Toledo.....	2 00	2 10	
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Enquirer, Cincinnati, O.....	1 00	1 00	55
Inter Ocean, Chicago, (w).....	1 00	1 00	55
<b>Cattle, Sheep, Swine, Poultry, etc.</b>			
American Poultry Journal, Chicago, (m).....	1 00	1 20	75
American Poultry Advocate, Syracuse.....	50	80	35
American Sheep Breeder, Chicago, (m).....	1 00	1 35	90
American Swineherd, Chicago, (m).....	50	80	35
Breeder's Gazette, Chicago, (w).....	1 75	1 45	1 00
Farm Poultry Boston, Mass, (s-m).....	50	80	35
Fruit Belt, Grand Rapids, Mich.....	1 00	70	25
Green's Fruit Grower, Rochester, (m).....	50	80	35
Hoard's Dairyman, Fort Atkinson, Wis.....	1 00	1 20	75
Horseman, Chicago, (m).....	2 00	2 05	1 00
Jersey Bulletin, Indianapolis, Ind. (w).....	1 00	1 35	90
Kimball's Dairy Farmer, Waterloo, Ia. (s-m).....	50	80	35
National Sportsman, Boston, Mass. (m).....	1 00	1 15	70
Poultry Keeper, Quincy, Ill. (m).....	50	80	35
Poultry Points, Kalamazoo Mich.....	50	70	25
Poultry Success, Springfield, O. (m).....	50	70	25
Reliable Poultry Journal, Quincy, Ill. (m).....	50	80	35
Swine Breeders' Journal, Indianapolis, Ind. (s-m).....	50	80	35
<b>Popular Magazines.</b>			
American Magazine, N. Y. City, (m).....	1 50	1 60	1 15
Cosmopolitan, N. Y. City, (m).....	1 50	1 60	1 15
Everybody's Magazine, N. Y. City, (m).....	1 50	1 60	1 15
Etude, Philadelphia, Pa. (m).....	1 50	1 60	1 15
Mechanical Digest, Grand Rapids, (m).....	25	70	25
McClure's Magazine, N. Y. City, (m).....	1 50	1 60	1 15
Musician, Boston, Mass. (m).....	1 50	1 55	1 10
People's Home Journal, N. Y. City, (m).....	50	85	40
Pearson's Magazine, New York City, (m).....	1 50	1 55	1 10
Red Book Magazine, Chicago, Ill. (m).....	1 50	1 55	1 10
Review of Reviews, N. Y. City, (m).....	1 50	1 50	
<b>Ladies' or Household.</b>			
Delineator, N. Y. City, (m).....	1 50	1 60	1 15
Designer, N. Y. City, (m).....	75	1 05	60
Farmer's Bazar, N. Y. City, (m).....	25	1 45	1 00
Housewife, N. Y. City, (m).....	50	80	35
McCall's Magazine, N. Y. City, (m).....	50	80	35
Mother's Mag. Elgin, Ill. (m).....	1 00	1 15	70
Modern Priscilla, Boston, Mass. (m).....	1 00	1 25	80
Pictorial Review N. Y. City, (m).....	1 00	1 25	80
Woman's Home Companion, N. Y. City, m.....	1 50	1 60	1 15
Woman's World, Chicago, (m).....	25	80	15
<b>Religious and Juvenile.</b>			
American Boy, Detroit Mich. (m).....	1 00	1 20	75
Boys' Magazine, Smithport, Pa. (m).....	1 00	1 15	70
Little Folks, Salem, Mass. (m).....	1 00	1 45	1 00
Young People's Weekly, Elgin, Ill. (w).....	75	95	50
Youths Companion, Boston, Mass. (w).....	2 00	2 05	1 00
(w) New Subscribers.....	2 00	2 05	1 00
Youths Companion Boston, Mass. (w).....	2 00	2 45	1 00
(Renewal).....	2 00	2 45	1 00



# Woman and Her Needs

## At Home and Elsewhere

### MOTHERS ARE "TOO BUSY."

THE story of a girl's ruined life is never pleasant reading. But it is often profitable to the mother of girls to know just how the other mother's daughter got started in the wrong direction. The state papers have been full of harrowing tales for weeks past of girls of 13, 14 and 15 years who have been ruined in dens of vice. Invariably the tale traced to its beginning shows that the mother was ignorant of what her girl was doing, who her companions were or where she went when she went out of an evening. Either the mother didn't care, didn't even take the trouble to ask, or else the girl lied and the mother never took pains to verify the stories. In any case, lack of confidence between mother and child was at the root of the whole thing.

If these girls came from the homes of the debased and ignorant we might excuse the mothers. But more often than not they come from homes of refinement. The fathers are all too often well-to-do artisans or professional men, the mothers, women of average education, intelligence and culture. What is the matter? How did they let their daughters get away from them? How could the girl be running about to cheap theaters, saloons and questionable resorts and the parents never know it? These are questions the police are asking, and they are questions every mother might well ask herself.

It began away back when the girl was just toddling around. There were other children, probably a baby younger. The mother was busy and worried and when the little one came to her, clung to her skirts and tried to tell her something in which the baby-mind was deeply interested, the mother loosed the clinging fingers, and bustled the baby away. She was too busy to stop for childish confidences. The little one came again and again before she has learned that mother wasn't interested in her, that the things she enjoyed were too trifling for mother to notice. As she got older she played in the street and there met girls who liked the same things she did. They had her confidence instead of her mother. Still older grown, these girls told her the mysteries of life her mother should have told her if she had not been too busy, or careless, to think about it. And the girl learned, not the things she should have known, but the things which poisoned her mind.

She began going out nights at an age when she should have been at home in bed. Her mother made a feeble remonstrance but was easily quieted by the story that she was going to stay with a chum and study. The mother, still interested in her own affairs more than in the girl, was satisfied. After that the descent was rapid. Six months, perhaps a year, and the parents are stunned to learn that their daughter, whom they still think of as a baby, is ruined for life. They blame everyone but the right persons, themselves.

So many mothers never think of their children when they are out of sight. Some of them seem to feel that their child could do no wrong, while others are quite frank and say they don't care what the children do so long as they don't bother them. To be charitable, let us assume that these mothers do not mean to be taken literally. They probably mean they don't care what the youngsters do so long as it is all right, and trust to the children's honor to keep out of mischief. But children are shockingly literal, and the child who knows her mother isn't over-particular isn't going to be a bit particular herself how she gets her good time.

Eternal vigilance is the price of safety with daughters as with everything else. The country mother may think her daughter is carefully guarded and could not come to harm. But the country girl meets her temptations, too. Cheap theaters are invading every country village. Trolley cars make a trip to a near-by city a mere incident, where 15 years ago it was an event, and even the best-intentioned girl is often influenced by her companions to do things she knows she

shouldn't. Chaperones are quite passe with the up-to-date American girl but if every mother would insist that her daughter should not go on an excursion that brought her back home in the middle of the night unless she was accompanied by an older person, there would be less chance for broken hearts and ruined lives.

Know what your girls are doing. Know their companions. Don't be just satisfied with having her tell you their names and who their parents are. Insist that she bring them to your home and pass judgment upon them yourself. She may think you are over-particular now, but there will come a day when she will rise up and call you blessed. The tendency in the modern American home is to let the young folks rule. Let us go back to the methods of our fore-fathers and insist that mature judgment is better than childish impulse.

DEBORAH.

### THE CHRISTMAS PUDDING.

BY LALIA MITCHELL.

The new housewife would fain make a Christmas pudding, but the recipes are difficult to follow and she fears a failure, so she either does without or makes the greater mistake of purchasing one in a tin can at the grocery.

The following recipe is easily made and less likely to fail than the mince pies which she attempts without a moment's hesitation.

Take one pound of beef suet fine chopped, one pound of seeded raisins chopped, and one pound of English currants. To these add one pound of bread crumbs, very dry ones, two large apples chopped fine, a little minced orange and lemon peel and two ounces of shredded citron. Mix these together, beat four eggs with half a pound of brown sugar, stir in half a cupful of milk, add an ounce of chopped almond meats and a teaspoonful each of ground ginger, ground cinnamon, grated nutmeg, and salt. Combine this mixture with the suet, mixture first prepared, add two wine glasses of brandy and three ounces of sifted flour. If this seems too stiff to beat with a heavy spoon, thin it with milk, it must be much thicker than ordinary cake dough, however, and there is little danger of its being found so.

To prepare the pudding bag dip a strong linen cloth first in hot water and then in cold. Wring very dry and sprinkle the inside generously with flour. Put the pudding in this and tie the four corners of the bag tightly together, being careful to allow plenty of room for the pudding to swell as it soaks.

Immerse the bag in boiling water and keep almost at the boiling point for five hours, adding hot water as it boils away. At the end of that time transfer the pudding from the bag to a large dish and set it away to grace the Christmas board.

### PRACTICAL GIFTS FOR THE HOUSE-WIFE.

BY MAE Y. MAHAFFY.

An inexpensive but highly desirable gift for the woman who has her laundry work done in the house, is a lining for the clothes basket. This should be made from heavy muslin, duck or some such material. A piece is cut to fit the bottom of the basket, and two pieces for the sides, each sufficient to go half round the basket. The side pieces are sewn to the bottom and together, and the top is bound with tape. Tape is then sewed to each end to tie about the handles, thus holding the lining in place. This will be found much more satisfactory than the usual lining of old papers. If desired, an additional oval piece may be bound as a covering for the top. This should also have ties for the handles.

Luncheon napkins of any description are useful in the household, but if something a little out of the ordinary is wanted a set like some recently seen will be found satisfactory, and will create a great deal of interest when guests are seated at table. These were about 16 inches square, of plain round-thread lin-

en, with an inch deep fringe. The noticeable feature was a quotation or saying worked in one corner of each, washable red thread being used. Blue would answer equally as well, and would be more suitable with blue and white china. The sentences were placed across the corner, and the napkins so-folded and laid at the plates as to make the writing easily readable. The words were first written in long hand with a pencil, then outlined in fine, even stitches with the embroidery cotton. Such sentences as these are suitable:

"Sit down; you are welcome."

"Small cheer and great welcome make a merry feast."

"A hearty welcome to thee, stranger."

"Sweets to the sweet."

"For auld lang syne."

"Face to face with our friends."

"A holy life is a continual feast."

"Show me the man that can live without cooks."

"God bless us everyone."

"For man must eat."

"Here friends are made, and here true fellowship begins."

"Eat, drink, and be merry."

"Come hide awhile with me."

"Lest old acquaintance be forgot."

Another practical and at the same time handsome gift, is a pillow top made from a yard of burlap, green being a good color. Cut from cretonne which has a striped design of several inches width, two bands, and stitch them onto the burlap about six inches from either selvedge edge. Fold the burlap to make a pillow half as wide as its length, and stitch across the ends just at the outer edge of each band. Ravel the six inches of burlap at each end to make a fringe. Turn the raw edges on the sides in and whip down to form an opening which can be caught together after the pillow is slipped inside. These pillow covers are so quickly made, and of such durable materials that they form one of the most desirable gifts one can make for the housekeeper, and are also good for the man of the house for his den, or for the boy's room. They also sell readily at bazaars.

### COOKING PUMPKIN.

Someone asks how to make pumpkin pie without eggs. As good a pie as anyone can make with the best of material can be made without eggs, cream or butter, if the pumpkin has been first properly cooked. In this lies the secret of real success. And the woman who calls it done when soft enough to be pressed through a sieve loses much of the delicacy of the pumpkin.

Cook in just enough water to keep it from scorching on the start, stirring only as often as is necessary to keep it from scorching, and when it is soft still keep on cooking and stirring occasionally. Finally it will need more close watching, and at the very last almost constant stirring. The finishing test is when it is so dry that it cleaves from the sides of the kettle when stirring. Then add for an ordinary sized field pumpkin, a tablespoonful of salt, a cupful of sugar, and a teaspoonful of ginger, stirring all thoroughly into the pumpkin before removing the kettle from the fire. Cooked in this way, unless the pumpkin is more than usually stringy, putting through a sieve is not necessary.

If the stirring process is deemed too laborious nearly as good results may be obtained by cooking in the usual way until soft, then adding the seasoning, and placing in a spider or large baking pan and finishing in the oven. In this way the flavor is as good, but the substance more inclined to be lumpy.

For the pies, allow a tablespoonful of flour to each pie. Thin the pumpkin with sweet milk until it is of such consistency as to readily place itself in the crust. Just how much milk is needed, depends entirely upon how dry the pumpkin is cooked, but a very few trials will enable one to adjust this right. Sweeten to taste, and add nutmeg and cinnamon. Bake in a moderate oven, and the pies should be of a rich brown color when done, and as rich in flavor as though stuffed with cream and eggs.—B. L. P.

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## OUR CHRISTMAS GIFTS.

BY ELLA E. ROCKWOOD.

It has come to be a matter of quite general consent, our Christmas gifts often go far wide of the mark. Where is an individual to be found who has not had the same experience, of receiving utterly useless presents which only served as a source of embarrassment later on?

I would not advocate confining gifts to such prosaic, practical things as handkerchiefs and hosiery, but we all admit that these hold no such terrors for the recipient as some of the impossible articles usually found among our collections the day after Christmas. Let us resolve this year to put more thought into our giving and not as is sometimes the case, delay till the last minute before deciding and then take whatever is easiest.

A good magazine, published twelve times a year, is a constant reminder of the giver. It may be addressed to the whole family as well as to a single individual, John Smith and Family, Box 26, R. F. D. 4, with the name of the post office, will ensure its safe delivery and always is a wise choice. A well chosen book makes an acceptable gift and these come in 25 and 50 cent bindings as well as the more expensive ones.

For the housewife no one ever makes any mistake in buying the practical articles which are in everyday use. A plain linen towel is more apt to find favor with her than an elaborate match receiver or a fancy pin tray. Probably she has more of these now than she knows what to do with. Handkerchiefs also are safe gifts for a woman, ditto aprons of both plain and fancy model. To a busy woman even a set of kitchen holders often represents the acme of acceptability. Several years ago a friend gave me at Christmas a pair of pillow slips with crochet insertion in the hems, finished with an edge of the same and I am yet enjoying them.

It is never so easy to select gifts for men, but here are a few which are on my safe list. A subscription to a magazine or farm paper. The Michigan Farmer makes an excellent present for a man who is a farmer and many like to read it if they are not farmers. Handkerchiefs are very much overworked at holiday time but are usually acceptable for all of that. A neat neck muffler for the man who wears one will prove its worth, but not all men wear them. A box of good socks for one of the family or a near relative will be all right but beware of neckties, which men like to pick out for themselves. Since nearly all men smoke, cigars of their favorite brand are welcome in quantity small or large. Pipes they prefer to choose, the same as neckties. Gloves may be said to be on the safe list, a pair of dark brown dogskin or mocha or the warm fur ones for cold weather driving. A young man would enjoy using a pair of fine military brushes while his dad would probably prefer a hair brush of the old-fashioned kind. Umbrellas are acceptable gifts for men of any age.

Girls are not hard to please and there are innumerable little things, in dress and its accessories that they are just longing to possess. It is never any bother to think of suitable gifts for them, anything from furs to feathers, boots to bandeaux. Since it requires so little to please a child there is no excuse for neglecting even the poorest. Extravagance in things perishable, such as expensive and intricate toys, will not be encouraged but by all means let their gifts include something besides the practical caps, shoes and mittens which they would have to have any way. Sleds, skates, toys, books, dolls, and dishes never fail to charm the little ones and the years when these satisfy are so few and so quickly passed that we should make the most of them.

A Christmas gift that fits is worth a dozen of the other kind.

## SHORT CUTS TO HOUSEKEEPING.

If your corn will not pop, when you get it in the popper, let cold water run over it and see how much better it will pop.—S. E. H. S.

Put a small handful of coffee grains around the roots of plants that are not thriving and in a few days you will see a vast improvement. Many new sprays will appear bright and green.—Mrs. J. J. O'C.

In making pies of fruit, mix three tablespoonfuls of flour with the sugar before putting it into the pie. The flour will not be in lumps through the pie, but will thicken the juice so the pies will not run over.—L. T. F.

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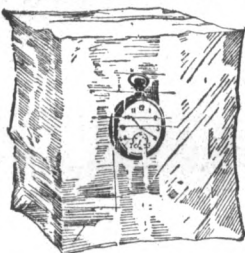
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## HOME AND YOUTH

BOOKS THAT CHILDREN WILL LIKE FOR CHRISTMAS.

BY PEARLE WHITE M'COWAN.

One can scarcely do a child a greater injustice, unthinkingly, than to leave the selection of his or her Christmas gift until the last moment, and then, in as much of a quandary as ever, turn to the bookshelves in some store and hastily select whatever sounds as though it might be interesting. True, one may stumble upon something good, but equally as likely you may get something entirely unsuited to the taste of the boy or girl for whom it is intended, and possibly even lowering to their ideals and standards of conduct.

We are all of us so much influenced by what we read, especially the young whose characters are just being formed, that it behooves us to put some serious thought upon the selection of the books which we place in their hands.

The boy with a leaning toward some special subject, electricity, possibly, or photography or history, would perhaps like a good book along his especial line. Don't try to get him one, however, unless you know what you are buying. No boy, however interested, cares to wade through page after page of dry facts and statements, told in language altogether beyond his age. If you do not know of a proper book on his favorite subject ask some educator, someone who has specialized along that line, to advise you in your selection, or else buy something entirely different, something merely entertaining, perhaps, but wholesome and elevating in its moral tone.

Among the story books there is a wide range of choice. I should hesitate considerably before presenting one of the Alger books to a child of mine. Not that I consider them especially demoralizing, in fact, they are doubtless intended to have the opposite influence, but there is so much dishonesty and trickery described in them, and their tone is so plainly trashy, that it cannot but help to cultivate a taste for something less than the best class of literature.

Not so, however, with some of our older standard works, the King Arthur Tales, for instance; but be careful to get those written in language suitable to the age of the child. The same holds true also of Robinson Crusoe, Swiss Family Robinson, Joan of Arc, and other entirely worthy books that every child should know.

Much has been said and written in a satirical line about the works of Ernest Thompson Seton. The skeptics have dubbed him "nature fakir," but when all is said and done, for real throbbing, interesting stories of the habits and customs of our wild animals, stories that any boy will like, he, after all, cannot be beaten. What if your maturer wisdom (?) does doubt the absolute truth of all his yarns, they at least inspire an interest in and love for our wild creatures that it will hurt no child to possess. In fact our boys will have finer, nobler natures because of the very instinct of protection which such books inspire.

Among books of this class let me mention, "Monarch the Big Bear," "Lobo, Rag and Vixen," "The Biography of a Grizzly," and "Krag and Johnnie Bear." Then there is "The Little Brother of the Bear," by William J. Long, and "Birds that Every Child Should Know," also, "Wild Flowers that Every Child Should Know," the two latter by Frederick W. Stack. And we must not forget to mention that splendid book of story and photograph, "What I Have Done with Birds," by Gene Stratton Porter. Another interesting and instructive book for the boy or girl who is studying geography is "Europe in Pictures," by H. Clive Barnard.

Also there is the long list of "Cousin" books which teach entertainingly of the customs of the land about which they are written. They are called "Our Little German Cousin," "Our Little French Cousin," and so on down the line of nations.

Then in the purely entertaining books, though wholesome and elevating in tone, are those old favorites which we loved in childhood, and which we wish our children to know and love, such as Louisa M. Alcott's "Little Men," and "Little Women," and "Jo's Boys." Also "Alice in Wonderland," "Black Beauty," "Little Lord Fauntleroy," "The Adventures of a Brownie," "The Pepper Books," "Beau-

tiful Joe," "Tom Sawyer," and many others that will suggest themselves to you as your own childish favorites.

Among other and later books that every boy or girl above twelve years old should know, must be mentioned, "The Second Violin," by Grace S. Richmond, and "Mother Carey's Chickens," by Kate Douglass Wiggin, the latter especially being one of the sweetest and homiest little stories written in the last few years.

"The Bishop's Shadow," and "The Big Brother of Sabin Street," are intensely interesting books, especially the first, and they are both of a high moral tone. The Bishop is supposed to be Phillips Brooks, and "his shadow," and the Big Brother (both the same character) the little street boy who accidentally made his acquaint-

ance and promptly took him for a model. "Dandelion Cottage" is a story every girl from ten to fifteen will love, while the Little Colonel Series, and "Two Little Knights of Kentucky," are among those that will stay by our children and be handed down to their children, even as we have done with "Little Men" and "Little Women." Their author, Anne Fellows Johnston, knows and understands girls (though some of the first of the series are equally as well loved by boys, for there are some splendid boy characters in them).

These are only a few, a very few, of the many thoroughly good books to be had for our young folks, but these few have proven especially popular with the boys and girls that I know well.

## BRAMBLE HILL.

BY ROBERT CARLTON BROWN.

(Book Rights Reserved by the Author.)

She had a chance to talk again next day and she poured into the ears of Mrs. Raimer, her mother's friend, all the story of her striving to learn.

Mrs. Raimer gazed at the pallid little face long and thoughtfully. Finally she arose and said, "I'll write to your father, dear. Tomorrow you may sit up in bed."

Jerusha wondered what Mrs. Raimer would write. She was in great doubt about everything; at times she thought she had been right to run away, at others it seemed selfish, unnatural. But the romance of a new life appealed to her. She almost wished she had maintained her new identity as Elizabeth Walters and had not blurted out her whole story impulsively. The romance of going out alone as a new person was appealing. She talked long to Mrs. Raimer about it next day and was surprised when the elderly lady smiled a breezy, youthful smile and said she quite agreed with her and if there was one thing that kept life intoxicating it was romance.

The next day as Jerusha was being helped into a wheel chair by a maid, Mrs. Raimer came in radiantly, extending a letter. Instantly recognizing the scrawl of Watts, Jerusha gave a little gasp of pleasure and eagerly devoured the following:

"My Dear Mrs. Raimer: You cannot know what relief your letter brought me. I was neither surprised nor pained when I found Jerusha's note saying she was going off on an adventure all alone. I was struck with a vague feeling of loneliness which grew into fear as I recalled the world, with which I have almost lost touch. Then I considered Jerry's resourcefulness and knew that no harm could befall her, and just as I was trying to combat my loneliness and cudgel my brain into believing that the girl would get along all right your charming letter comes.

Yes, I agree with you. Jerusha must have scope. She is like her mother, as you say, only I regret that I have been unable to give her the opportunities her mother had.

Your suggestion that I come and visit her while she is with you sets me tingling, but I have been out of the world so long I am fearful of undertaking the journey. Besides, I want Jerusha to do the thing she calmly thinks best. If she saw me she would surely come home and I am certain that would not be for the best.

If you will talk over your kind suggestion with Jerusha I shall abide happily by your mutual decision.

I have heard Elizabeth speak of you often and I am sure, since the tie between you girls was strong, it cannot be less between you and Jerusha when you get to know her.

I enclose a note to Jerusha, and I can only extend my fervent thanks again to you for the kindness you have shown my little adventurer.

Believe me, my dear Mrs. Raimer, your most devoted servant,

Zebediah Wattles.

P. S.—I appreciate your youthful viewpoint in wishing to help Jerusha maintain her little romance and you may rest assured I shall keep the story secret until you two decide the best solution.

Jerusha glowed as she finished the letter and looked her thanks into the confident eyes of Mrs. Raimer, who stood by, waiting for her to read Watts' note to herself.

Jerusha opened it with nervous fingers and read:

Dearest Jerry: I understand. You have inherited your nature from both mother and me. I have only hampered your future and now you have a chance.

You won't know until you are much older how fortunate you were to fall into kind hands at the outset. But God looks after his own and you have been well looked after. To think that a horse should have stepped on your foot, and that in the buggy was an old friend of your mother's who took you home and nursed you. But life is just like that. Now don't worry about me. I have

the bees to keep me busy and Sidney for company.

Mrs. Raimer has been kind enough to suggest that she may be able to help you solve your future. Do what you both think best, dear, but be guided by her advice, for she is older and knows your need even better than you do.

You have an opportunity. I can sympathize with your adventure and when anyone asks about you I shall only say you are away at school. You are, aren't you? The school of life!

You must send me a kiss every night and I will receive and appreciate it. But don't come back till you are ready. I am honestly happy that you have put yourself in the way of progress, although you can imagine my first shock.

You must write me and tell me your adventures if you decide to stay with Mrs. Raimer, and I shall look them all up in my breast and fondle them over daily.

We shall be just as close by letters, though I will miss your corn bread. I'll tell you about the cow and you'll have the advantage of knowing all about home without having to be here.

Now that you've taken the step I am glad, and if you'll write me every day or so, you are more than forgiven.

With all the love and hope in the world, my dear,

Watts.

Jerusha handed the letter to Mrs. Raimer and dropped her head to hide the tears glistening in her eyes.

"He is right," exclaimed Mrs. Raimer on finishing. "And you will stay until the foot is well and we can come to a decision about what is best to be done."

"Of course," cried Jerusha gratefully, adding a postscript to a letter she had already written Watts and giving it to Mrs. Raimer to be mailed.

That afternoon for the first time the doctor said Jerusha might see Mrs. Raimer's grandchildren, whom she had heard romping about the house. Mrs. Raimer had already explained to Jerusha that she was only visiting her daughter in the house and caring for the children while her son-in-law and daughter were on a holiday trip.

The children came in, and in the spirit of adventure which Mrs. Raimer adopted so easily she introduced Jerusha to them as Elizabeth Walters. Before the day was out the children were calling her Elizabeth and making her cut paper dolls and fashion cups and plates out of tin-foil as she alone knew how.

Jerusha felt she was living in fairyland and was really Elizabeth Walters before another week had passed.

When she could hobble about she looked after the children and wrote daily to Watts about the fine house she was living in and how Mrs. Raimer read aloud to her and what fun they were having. She told minutely of the electric lights and the funny shower bath that made her tingle all over every morning, and Watts at home mumbled over the letters in secret and was glad.

She wrote all that Mrs. Raimer told her about London, New York, Paris and Venice and said that it reminded her of the way Sid talked. She told him how the eldest child really spoke French, and about the surprise party planned for the youngest on Saturday.

Jerusha looked forward to that party with the enthusiasm of a child. She was a novice in parties and it was splendid to plan with Mrs. Raimer, who sometimes seemed her own age, how the lawn should be decorated, and everything. There was an air of silent-footed mystery about the house which proved positively intoxicating and Jerusha spent the day before the party keeping the children entertained and away from the back windows so they would not know what was afoot.

She was up early on the morning of



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the party and after breakfast trooped out to the fairy-land lawn with a crowd of happy-faced neighboring children, neatly dressed, soft mannered, so much more grown-up than those in Turtle Creek. There were bright hammocks and little nooks for games. Behind the grape-vine, growing leafless, was a real merry-go-round.

The boys and girls were racing eagerly for the first ride. Jerusha followed with Mrs. Raimer, as happy as they; she still used her crutch, but her eyes beamed and no one would have known from her face that there were still little shooting pains in that bothersome foot.

As she passed through the grape vines and beheld the merry-go-round she gave an involuntary start as she stared at the man in charge. A strange fear gripped her. The man was bowing to Mrs. Raimer. He wore a mussed red bandana about his throat and spoke with a foreign accent, "Da merrie-go-around is ready, Madam."

It was Bango. As Jerusha recognized him the smile faded from her face and her cheeks went red with a rush of blood. Bango turned to her with an absent stare, as though trying to place her.

Jerusha was glad for the new dress Mrs. Raimer had forced upon her as a loan. She had a frantic desire to maintain her identity as Elizabeth Walters; it was part of the game, and her terror at possible discovery was almost genuine.

Later, sitting with Mrs. Raimer in the grape arbor she told of her fright and how already she felt like another person living in a strange land and having wonderful adventures.

"That is the spirit of life," said Mrs. Raimer, who knew the story of Bango. "You must continue your adventures. I'm going away next week and you must come with me."

"Oh, but I mustn't!" Jerusha cried. "I must find some work to do. You have been too good to me already."

"Now, Elizabeth," smiled Mrs. Raimer, using the name which pleased them both. "You will find it work to travel with me. You will be my companion. I am often irritable and cross—"

"Oh, I can't believe that," Jerusha put in.

"And you must keep me young. I hate to travel alone. I need someone young about me constantly to keep me sweet, you know, as the hay needs sun. I need someone to look after me a bit, too. You must come. You'll find me fussy and all that, it will be work for you, but you will see the world, and if you will travel about with me I'm sure we can pick up some things worth while."

It was the opportunity Watts had spoken of. Jerusha, happy in her new life, was tempted. She had not seriously thought ahead and realized that Mrs. Raimer must go and would offer to take her along. If she could only make herself feel that she could furnish value received from Mrs. Raimer she would go. The temptation gripped her, but the offer seemed so one-sided. Yet she might make herself valuable as a companion. She would!

"But are you sure you need me? You know I'd love to go," she cried frankly. "It will be expensive to have me around all the time. Do you think I could do enough to repay you?"

"Mercy, no! I don't think you'll have anything to repay me for. Your part is just to be around all the time. I hate to be alone. You won't ever be in the way. It isn't your nature. That's what I want somebody for. I'm thinking too much of myself and the ills my flesh is heir to. If I had a niece or a grand-daughter as yet eligible as a traveling companion I'd have had one of them with me long ago. I like to see things through young eyes. I like youth about me. I think you will help me considerably."

So it was settled; Jerusha jubilantly wrote of her decision and opportunity to Watts and she was in a great flutter of excitement for three days following.

She made trips to Chicago with Mrs. Raimer and picked out wonderful weaves she had never dreamed of before, and bought hats that put Miss Bettes' to shame. But Mrs. Raimer's shopping for Jerusha was not extravagant; it was only productive of decent, good-looking things that would wear. Mrs. Raimer was an economist in her way and she did not believe in a girl having anything more than necessary; but, of course, her way was far different from anybody's in Turtle Creek or Bayview.

Jerusha had never even imagined sleeping on a train. To think of having almost a little house of one's own to travel in at the rate of a mile a minute!



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How Watts would enjoy it! It was all quite too wonderful for her. She thanked the porter every time he touched a shade or flicked a bit of dust from the furniture; she thanked the waiter in the dining-car so often that Mrs. Raimer was forced to admonish her by explaining that such thankfulness would require a tip out of all proportion at the end of the journey.

To think of spinning through thousands of little box-like places so gruesomely like Turtle Creek; just rushing by, not giving a second's thought to one of them. Rushing by to New York, where everything seemed like the great dream of a poet, or an artist. If Watts were only with her! But she must not think of that.

There was much waiting for Jerusha in New York, much more than she had ever imagined. The hurry and bustle of it all enthralled her. It was all very wonderful, she could not help repeating. She had awakened in just the place she had hoped to. And Mrs. Raimer was so indulgent, seemed to take such great delight in the girl's fresh appreciation of everything. At Jerusha's merest suggestion they went next day to see a Whistler exhibition at the Metropolitan. It was her introduction to the world of art; she could not have had a better one—it was never forgotten.

Such a palace they lived in, too. Jerusha could never get over the marvel of going downstairs in an elevator and rolling up Fifth Avenue with Mrs. Raimer to the nearby art galleries and theatres. Every hour seemed like the turning of a new page in a very romantic fairy tale, like sampling a fresh bottle of exquisite perfume. Mrs. Raimer enjoyed it all from Jerusha's viewpoint and helped maintain the joyous spirit of discovery which she loved, continuing to call her companion Elizabeth and introducing her as Miss Walters.

They had four splendid rooms at the Clendenning and went downstairs to their meals in a big dining-room. She wrote sparkling letters to Watts about the fairy-land and he addressed her as "My Princess" in answering, and fell in with the spirit of the play quite as enthusiastically as Mrs. Raimer.

On the second night came their first caller. Jerusha was distinctly unnerved at the thought of meeting a young man who knew no home but New York, who had lived at such a sumptuous hotel as the Clendenning most of his life. But Mrs. Raimer insisted on Jerusha's presence at the call of her nephew.

Jerusha thought of Sidney Edgeworth and tried to picture what this young fellow might be like. Sid had told her of Doodle and Jim and the other Harvard men. She was a bit awed by his descriptions.

By the time the nephew, Fitzdun Raimer, appeared, she had quite composed herself and was ready to meet him with a natural frankness, not without unconscious charm. She patiently overlooked his dawning manner, and baby mustache, and soon became interested, fascinated by his ease of manner. He had such a command of interesting topics, and he talked with Aunt Raimer about things which Jerusha had read of, but never known. He told about an airship he had and how a friend of his had won the Vanderbilt Cup race. He talked about polo, Paris, and a thousand fascinating things, and what did it matter if he did continually jerk at his mustache like a conductor with a bell-cord.

Jerusha took no part in the conversation except when Aunt Raimer drew her out; then she always came up to expectations; she was on her mettle, and it pleased her to see that Fitzdun Raimer could find her interesting enough to talk to alone when Mrs. Raimer was called to the phone for a lengthy conversation, possibly guiltily prolonged.

Doodle was mentally comparing her tan to the best he had ever seen on the girls at Newport who affected athletics, and deciding he must ask his aunt more about her. There wasn't much work for her private maid, he thought, grooming and massaging a face as firm and childishly round as that. How well she wore her clothes, too. Sort of an air that made their faultiness simplicity tell!

There was something of the latent actress in the childish fancy of Jerusha. It wasn't that Doodle flattered her or that she was impressed with his evident interest. But at last, from his manner, she felt herself a social equal and unconsciously acted her end of the part.

"I'm so glad you are to be with Aunt," said the young fellow. "She needs someone young and frivolous. You'll find her quite a jolly sort, I'm sure."

All the young people like her. I used to have a chum, Sid Edgeworth, who called her the salt of the earth, and 'his affinity,' used to be around when she came to see me at Cambridge; said he found her better fun and much younger than any of the girls who—"

"Sidney Edgeworth!" Jerusha had cried in a low tone of surprise, the name only half audible. But "Doodle" Raimer had caught it and interrupted himself: "Yes, Sid Edgeworth, do you know him? Or have you heard Aunt talking about him? I forgot to tell her; he's marooned out west in some little town near Chicago now. Aunt might have called him up and asked him in to see her. It would have been some relief to Sid, I guess. Having an awful time with the mosquitoes and natives, according to the last word I had from him. I wonder, do you know him?"

"Oh, no," Jerusha's assurance was quick, just a bit too eager. "Probably I've heard Mrs. Raimer speak of him. The name sounded familiar."

That night, before going to bed, Jerusha adroitly gained from Mrs. Raimer all her knowledge of Sidney Edgeworth. It was hard for Jerusha to conceal her wrapt interest as Mrs. Raimer recounted little illuminating incidents which brought Sid fresh before her. It was so good to hear Mrs. Raimer declare that next to Doodle there wasn't a finer chap that ever loafed his way through college. In her enthusiasm over Sid, Aunt Raimer let slip by unnoticed the girl's unusual interest in him.

Alone in her room that night Jerusha took from the little black purse, tucked away inside a modish new one, a dried four-leaf clover. She held it close and inhaled its crisp fragrance for a long minute; as she took it away it brushed against her lips and she let it remain there a thoughtful moment, her lips caressing it unconsciously.

Then she brushed back her hair and tucked the dried leaf away. Sid had picked it on one of their rambles and given it to her for good luck. She had brought it along, with a broken mute which Watts formerly used on his violin before he was forced to sell it. Those treasures she guarded zealously; it was all of the past she cared to carry with her, all the past she needed until that someday when she and Watts should—But it was bed-time. This was no way to serve Mrs. Raimer, and that should be her every thought.

#### Chapter VIII.—Wanted—A Heroine.

You can't sentence a man to any prison for twelvemonth and find him the same man at the end of the sentence. Sometimes he becomes unruly and ends in solitary confinement, again he gets religion, is thinner and wiser; while often he fits in with the scheme of things so well that he has become a "trustee."

A year in Turtle Creek.

Sid was much changed. But he was no "trustee." The energy he had shown at the Old Settlers' Reunion had given him a temporary spurt of popularity. But it hadn't lasted, and Sid had slipped back.

Naturally the disappearance of Jerusha, which had caused no little sensation in Turtle Creek, forced him to go farther in search of companionship. Watts became preoccupied after his daughter had gone, and he was so peculiarly silent and secretive that Sid did not find the old pleasure in his company, for he could never be made to talk of Jerusha. That Watts heard from her Sid was certain, but he could get no more satisfaction than that Jerusha was away at school and doing nicely.

Of course, Jerusha's standing in town was utterly lost. At first it was said she had been kidnapped by the gypsies, then that she had run away with a drummer, after that—oh, all sorts of things. When Watts announced that she was away at school, nobody believed it, and other rumors floated about; some said she had gone to Chicago to be a stenographer, others that she'd gone to be an actress, but nobody came very near the truth in nearly ten months that had elapsed.

Sid had had another fling at Turtle Creek society. Sam Dunlap, possibly impressed by the young fellow's activity, urged him to continue his calls at the house. Sid took advantage of the opportunity and gladly plunged into the social swim once more. But his success was only conspicuous because of its failure. He didn't seem to fit in; Susan Dunlap was the only girl who attracted him, but it was so seldom he could ever see her alone, and never at a social gathering, for Harold Ewer was always present. Sid grew tired, too, of hiding his cigarette at

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the approach of every respectable citizen and so fell back into dissolute ways—for Turtle Creek.

The whole year had netted less than three thousand dollars, for the grape juice had not been very profitable on account of purchasing the necessary equipment, and the bees had not begun to pay. His income was approximately the showing Nathaniel Edgeworth had so shrewdly anticipated. His best splurge of business ability had brought less than two hundred dollars, and that was soon swallowed up in expenses; so on the report that Sid handed to the executors of the will the figures read \$2,837.00 in proved receipts. Not a very good showing.

Sid was discouraged. He had tried a dozen ways to make money, but somehow they had all fallen through. He didn't possess the necessary persistency or something; he lacked business balance.

Hornbill strove heartily in his service, but it booted him nothing. Poor old fellow, he was a faithful vassal, working hard and doing his best. And now Fate had chosen Brigadier General Hornbill to deliver the final blow of Fortune to Sid. It was cruel, and hard for the old fellow to bear. He had stayed off informing Sid of the impending things. He had put it off till the last minute, when he feared Sid might overhear the news in town somewhere, and it was his duty to inform him at first hand.

One evening in middle August, as they sat after supper on the veranda, enjoying the evening cool, killing mosquitoes and time, trying to poke into life a most desultory conversation, old Hornbill led up to the subject.

"There'll be changes in the old town afore long, I fear, Sidney," he said.

"Oh, I dare say Stimpson'll cut his whiskers again or somebody'll paint his barn for winter," answered Sidney Edgeworth, looking up with little interest.

"Yes, I s'pose you're right," answered Hornbill meditatively. "But be that as it may, I'm thinkin' there'll be more important changes. I've a notion the old farm won't be the same as it usta be."

"Are you going to rotate the crops or put the cows out in the north forty for a change?" asked Sid, his mind quite easy, for there were no surprises in store for him; he had settled into the dull routine and had taken a little to reading in tiresome law books—all the house afforded—a diversion of his grandfather's.

"Yes, I'm goin' to put that twenty acres out behind the crib there into corn next spring. But that ain't all."

"No? Well, what then?" asked Sid, a bit exasperated by the old fellow's insistent repetition.

"Well, there'll be a lot of changes I'm thinkin', when—when the new railroad comes through."

There! It was out!

"New railroad?" asked Sid idly. He seemed to remember overhearing some talk of it in the village.

"Yep. It's runnin' through Bayview, you know, an' it's comin' this here way. Haven't got a notion why they're thinkin' of Turtle Creek, but it sorter connects a couple of big towns and they might as well stop at a little town now and then on the way, you know. Just for a sort of rest like."

"Don't think it'll boom property do you?" asked Sid hopefully.

"No. It does do that in some towns. But there ain't nothin' here to boom," answered Hornbill. "But be that as it may, I think it'll be more than inclined to hurt the property through this here way."

"Of course it won't touch the land here," said Sid confidently.

"That's just the trouble. I'm of the opinion that it will." He paused and took a reflective pull at his pipe, then led up to the thing delicately. "You've noticed them fellers sort of surveyin' about the land an' the town in general lately?"

"Yes, but what's that got to do with it?"

"Nothin', only, well, I was talkin' to one of them fellers t'other day an' he tells me they're plannin' to cut through your land here," he said hesitatingly.

"Good!" cried Sid. "Then we'll sell it to them for a big price and I'll make that hundred thousand."

"Well," answered Hornbill timidly, as though the thing were still open to argument, "they'll be cuttin' through the best part of the land; they'll be wantin' about a hundred acres, an' you see, the very top price for that there land is a hundred an' ten dollars an acre. The very top price."

"And that would be only ten thousand dollars. A tenth for charity—" said Sid thoughtfully.

"Only ten thousand is right!"

"But, I say, they can't do that! It wouldn't be fair to me!" cried Sid. "Why, by George, there'll be little more than the creek land then and we can't make much out of that. Why, I'll never have even a chance to make that hundred thousand dollars."

"I was just goin' to remark, it don't look at all likely."

"But I say, that's not very decent; they ought to pay me a better price. Look what I'll lose by it! They must take that into consideration."

"Be that as it may, they won't! They'll condemn that property an' they'll ride over you rough shod an' pay just what a court decides it's worth."

Sid was pacing back and forth across the porch, his shoulders jerking and a very puzzled look on his face.

"Not very sportsmanlike, these railroads, are they?" he cried suddenly. "Looks jolly close to highway robbery. I say, couldn't they run their confounded road somewhere else? Through some chap's property who doesn't need the land, but does need the money?"

"They might run it through Bramble Hill," reflected Hornbill.

"Fine! Now there's a worthless bit of land. Why don't you suggest that to them, Hornbill?"

"But, if they do that," cried the old fellow, "it won't do you no good to marry Susan Dunlap. There won't be no Bramble Hill left to have Sam Dunlap give ye as a weddin' present."

"General, you're a horrible alarmist! The railroad is coming through my land and spoil all my chances to earn the hundred thousand; it may cut through Bramble Hill, too. Then both provisions of the will would be blocked to me. Lovely prospect, isn't it?" He thrust his fists deep into trousers' pockets and increased his pace, striding back and forth excitedly.

"It looks bad, Sidney," exclaimed Hornbill. "But they prob'ly won't cut through Bramble Hill, too. We'll hope for the best, anyway. Still, Sidney, they're sure to condemn that hundred acres an' pay you what they call a fair price, if you don't agree to sell it to 'em cheaper at first. There was a feller here talkin' to me about it a week ago."

"Is that so," remarked Sid slowly. "I suppose you didn't want to trouble me with the business details. It was good of you. But it comes pretty hard hearing it all at once, you know. I suppose you've dreaded it for some time. It's never popped into my head before and the shock had sort of unnerved me, I guess. But then, it was good of you not to bother me with the worry until now that it's necessary."

"Yes, I seen it comin', Sidney," replied Hornbill in a quavering tone. "I guess maybe your grandfather knowed this was goin' to happen, too. He was a powerful far-sighted man. That's how he made his money."

"Then I presume that hundred-thousand-dollar clause in the will was a trick?" Sid was flushing deeper and walking faster. "He got me to live here a year, knowing that this was going to happen, that the railroad was going to cut through this land, and that I'd never have the slightest chance to make good on that will? Is he trying to make a fool out of me with that will or what, do you think?" He turned and looked quizzically into Hornbill's troubled eyes.

"No. Not that, Sidney. He only just wanted to have his own way, that's all. You see, he fixed it so it would be impossible to make that hundred thousand dollars. But be that as it may, Sam Dunlap's mighty happy over this right-of-way business, you can bet. It puts you kind of out of the runnin', the property'll all go to Susan, unless—"

"Confound it!" cried Sid, stopping abruptly. "Isn't there some way out of this trap? It's a blooming octopus, hugging me close, that will. There must be a way to loosen its tentacles. You're shrewd, Hornbill. For heaven's sake think up something. A man ought to have at least a chance left. It's like being a drunkard with his bottle broken on the Sahara. I can fight when there's a chance. But there isn't a single hope left. They don't play fair, these railroad people—"

"Corporations ain't got no conscience. They can't stop a train to consider an individual, unless he's on the track an' they want to avoid damages. But you just—"

"What a fool I'll look if the property is sold for ten thousand dollars and I stay around here for three more years trying to glean a living from the chaff that's left?"

(Continued next week.)

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### THE STATE GRANGE IN SESSION AT SAULT STE. MARIE.

With every county in Michigan—barring far-off Keweenaw—entitled to representation, and with more than 30 new subordinates added during the year, the body of delegates assembling at Sault Ste. Marie as this is being written promises to make a new record for the state so far as numbers are concerned. That the attendance of patrons not delegates will also surpass that of many former years is anticipated from the interest displayed by the loyal patrons of the Upper Peninsula who, for the first time, are enjoying the privilege of attending a State Grange "at home." Proud of their success in planting and developing the Grange throughout the peninsula, and grateful for the benefits that have come to them through the organization, they will bring to this meeting a spirit of enthusiasm and a confidence born of accomplishment which must prove inspirational to patrons from the older sections. The holding of a state meeting on the farther side of the Straits at this time is a fitting recognition of the earnest endeavor of the men and women who have added more than 100 Granges to Michigan's roll, and will result in a general conviction that the Grange, as an essential factor in the agricultural progress of that region, is building, not only rapidly but substantially. A concise and accurate report of the proceedings will appear next week, supplemented, in succeeding issues, by fuller details of the outstanding features of the meeting.

### THE NATIONAL GRANGE MEETING.

#### Proceedings of the Forty-sixth Annual Session Boiled Down.

The delegates to the National Grange, consisting of the several state masters and their wives, assembled in the elaborately decorated drill hall of the armory in Spokane, Wash., on November 13. This year 30 states were entitled to representation and 29 responded to roll call, Kentucky, whose master was detained by illness, being the only absentee. On motion of National Lecturer Hull a message of sympathy was despatched to the absent delegates, Master F. P. Wolcott and wife.

In reviewing this meeting it is impractical to enumerate the various functions of an educational and entertainment character which served to relieve the monotony of routine convention work. Suffice it to say that the city of Spokane and the patrons of the coast states gave the organization a great reception, that the attendance of visitors was fairly satisfactory and that the reports of officers and standing committees, without exception, showed the organization in healthy, thriving condition. That section of the country was clearly entitled to a visit from the National Grange, the order having grown remarkably in Washington, Oregon, and adjoining states in recent years. At this meeting the seventh degree was conferred upon a class of 199 patrons, mostly from the states of Washington, Idaho, Oregon and Montana. Twenty-eight of the 29 states represented contributed to the total of 472 new Granges formed during the year ending Sept. 30 last—the largest number organized in one year in the history of the organization. Montana was admitted to the sisterhood of Grange states during the year and organization work was begun in Wyoming but as yet not enough Granges have been formed to give the state representative in the national body. Work preliminary to organization was also done in the states of Virginia, North Dakota and Tennessee.

The impressive annual memorial service was held on Sunday, Nov. 17, nearly a dozen delegates assisting in paying a last tribute to the memories of members of the national body who passed away

during the year. The names of those memorialized were: Samuel E. Adams and Wm. S. Chown, of Minnesota; Frederick Robie and Edward Wiggins, of Maine; Thaddeus Graves, of Massachusetts; J. M. Thompson, of Illinois; A. B. Peck, of Connecticut, and Mary M. Reardon, of Kansas.

Before final adjournment was taken the delegates voted to hold next year's meeting in New Hampshire.

#### Master Wilson's Recommendations.

After reviewing the year's work and showing that National Grange finances continue in satisfactory condition, the National Master said, in the course of his annual address: "Last year the National Grange gave its executive committee authority to expend in extension work an amount that would not reduce the funds in the treasury below \$100,000, no organized state to receive more than \$2,000 per year. The committee was also authorized to expend in the organization of new states not more than \$5,000. The results have been very satisfactory, and the national master recommends that the same plan be carried out another year. He holds that it is more important to build up the Grange in weak states than to organize new states."

The working out and putting into active operation a practical system of financial co-operation that will benefit not only the producer but also the consumer was advocated. Master Wilson believes that such a system can be inaugurated as will enable patrons of one section to buy or dispose of their products to patrons or Granges of another section, thereby eliminating all intermediate profits.

He reminded the delegates that the last National Grange endorsed the Lewis bill for postal express. Becoming convinced, however, that the measure had no chance, the executive committee gave its support to the parcels post measure which finally became a law. While this law is not all that the Grange desires, he recommended giving it loyal support, the Grange meanwhile redoubling its efforts to secure a general parcels post system.

On good roads he said that, since 75 per cent of the country's products must pass over the public highway before they can be transported over railway or water system, the Grange should favor suitable appropriations by Congress for highway construction and maintenance, to be expended by a national highway commission working in conjunction with similar commissions in the states.

Relative to the Grange and politics, Mr. Wilson said: "I am always pleased to see our members elected to offices of trust, and believe thereby our organization is enabled to do more effective work, but no official or past official has a right to use his official position, or to allow himself during political campaigns to be introduced as an official of the Grange; nor has any official or member the right, according to our organic law, to write partisan letters or addresses for publication and allow his name to be signed thereto as an official or past official of the Grange."

Among further recommendations may be noted a demand for the immediate repeal of the Canadian reciprocity law now upon our statute books; for the establishment, by the Department of Agriculture, of more experiment stations in all parts of the country as means for practically illustrating to the farmer the importance of soil conservation; for lending Grange influence in so modifying our educational and social systems as to better conserve the health, morals and intellect of the American child; for active support of the oleomargarine measure, recently prepared by representatives of the Grange and the National Dairy Union, which will be considered by the present Congress; for the ratification in each Grange state of the amendment to the federal constitution providing for election of U. S. Senators by direct vote, a reform of which the Grange was a pioneer advocate.

#### Financial and Other Reports.

The financial statement of the treasurer, Mrs. Eva S. McDowell, of Massachusetts, gave the total resources of the National Grange on Oct. 1, 1912, as follows: Balance with the Farmers' Loan & Trust Co., \$13,971.36; deposits in savings banks with accrued interest, \$11,159.02; railway and other bonds, with accrued interest, \$55,766.62; loans on real estate, with accrued interest, \$17,527.63; unexpended Grange extension fund, \$655.72; unexpended deputy fee fund, \$310. Total, \$99,390.35. Dues received from the various State Granges during the year aggregated \$20,757.13, New York leading with \$4,974.11, Michigan being third in the list with \$2,405.22.

National Secretary Freeman's report showed 472 Granges organized and 33 reorganized during the year, with 786 seventh degree and 4,592 sixth degree certificates issued.

Chairman Godfrey, of the executive committee, presented the following statement of funds expended during the past year: Salaries, \$3,975; executive committee, \$1,159.09; loans and expenses, \$10,042.66; miscellaneous, \$4,247.87; National Grange Monthly, \$3,702.60; expenses of secretary's office, \$1,041.97; supplies for secretary's office, \$4,388.08; National Grange session expenses (1911), \$2,823.62; Hampton case, \$440.86; extension fund (master), \$18,000; deputy fee fund, \$2,400. Total, \$52,221.75.

National Lecturer Hull, in his report, referred to the aid given to subordinate lecturers through the lecturer's handbook, prepared and issued during the past summer in accordance with the action taken at the last national meeting. In all about 6,300 copies of the handbook have been sent out. During the year the

National Lecturer attended Grange meetings in eight states, devoting much of his time from July 15 to Sept. 15 to the summer field meetings. Reviewing the lecture work, he said: "Our Grange lecture field is broad, almost infinite, and fraught with possibilities that no man can measure. We can not well put too much effort into the work of furnishing help, encouragement and enthusiasm to our leaders in this field. No one line of endeavor will bring greater results along this line than the holding of state and subordinate lecturers' conferences."

#### Results of Committee Work.

The carefully prepared reports of the numerous committees were well considered, some of them discussed at length, but space will not permit of more than a mere record of the action taken on questions of general interest and importance.

In recommending the organization of Grange fire insurance companies wherever membership justifies, the Grange gave full credit to these companies for not only having benefited members financially but for having proven a powerful factor in building up and strengthening the order. As to life insurance, a special committee was created to investigate the different methods of life insurance, based on the legal reserve and adequate rate plan, and report at the next session of the National Grange. Messrs. Smith, Black and Pettit were named as the committee.

Good roads appropriations by Congress were favored but the Grange held that each state should work out the most feasible and practicable system of building and maintaining its roads and there should be national, state and county co-operation. This does not carry with it the idea of a system of national or cross-state highways, but rather a market center system of roads, and when these are properly looked after in the various counties of the several states, transcontinental highways will naturally follow. The committee stated that the cost of transporting farm produce in this country is 32 cents a ton per mile, against 10 cents in European countries. The average haul is 8.4 miles, therefore our farmers pay \$1.26 more to get a ton of hay to market than they would if they had roads equal to those in Europe.

The manipulation and inflation of trust companies' stocks and bonds were held to be responsible for the consumer being compelled to pay interest and dividends on many times a just capitalization, and exorbitant salaries to many useless officials, and the National Master was authorized to appoint a committee of three to study and summarize the results of the various investigations conducted by Congress and other reliable sources of information, and put the same into suitable form to report at the next annual session, the necessary expenses and per diem to be allowed for this committee.

Under the head of co-operation the Grange endorsed the proposed American commission for the investigation of European systems of agricultural finance and in addition proposed that the legislature of each state in the Union be urged to appropriate the sum of \$2,400 to defray the expenses of two delegates who, in company with the delegates from the other states, shall make a study of the various financial systems of the world, and evolve a plan that shall meet our financial needs. It also advocated the creation of a bureau of markets in the Department of Agriculture for the gathering of statistics and information and the dissemination of knowledge with a view to the better handling and marketing of staple agricultural commodities, as outlined in the Hoke Smith bill that passed the Senate last session. Co-operative buying and selling plans submitted simmered down to the creation of a bureau of information, with the National Grange Secretary at its head, who shall, with the aid of the states having similar bureaus, list and classify the probable surplus products of these states and aid in finding the best markets and the best methods of marketing, and make an equally careful inquiry in relation to those articles needed and consumed by each state, and in all cases of inquiry render all assistance possible in the way of demand, supply, prices and cost of transportation.

Proportional representation in the National Grange was again defeated, the rejected resolution proposing that each state master and wife, or husband, shall have one vote, and also, for every 10,000 members above the first 10,000, shall have one vote each additional. A like fate befell resolutions calling for increased compensation for organizers, and for an increase of the extension fund allotted to each state from \$2,000 to \$3,000.

On the recommendation of the committee on transportation the Grange reaffirmed its stand for placing the postal service on a par with that of the leading nations of Europe. It also held that the time is ripe for a nation-wide movement to secure physical valuation of all interstate railways and proposed taking steps to organize a movement to secure necessary congressional legislation.

Master Wilson and Delegates Atkeson and Pattee were named a committee to confer with President-elect Wilson about the appointment of a capable representative of the farming interests as Secretary of Agriculture.

Among resolutions of lesser moment that were adopted are the following: Favoring the legalizing of co-operative enterprises by Congress and state legislatures; endorsing the action of Congress in restriction of immigration; opposing legislation abridging the freedom of the press; favoring the Newlands River regulation bill, so that all river regulation projects shall be treated as units from the source to the mouth; opposing the pending oleomargarine measure known as the Lever bill and favoring the encouragement of vocational education by congressional appropriation as proposed in the Page-Wilson bill.

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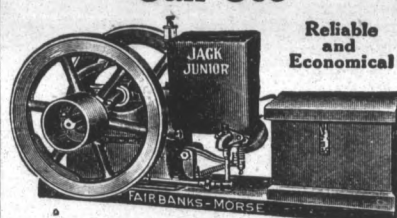
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## FARMERS' CLUBS

### THE ASSOCIATIONAL MEETING.

Delegates assembled for the twentieth annual meeting of the Michigan State Association of Farmers' Clubs in Representative Hall, at Lansing, at 10:30 a. m., December 3. The morning session was devoted to the routine business of the convention, which included the payment of dues, presentation of credentials and appointment of regular committees which were as follows:

**National Affairs.**—A. R. Palmer, J. McDevitt, C. B. Scully and Mrs. Ida E. Webb.

**State Affairs.**—James N. McBride, G. W. Detwiler, A. B. Cook, Edgar Burk and F. Williams.

**Honorary Members.**—Ex-Presidents, with J. T. Daniels, chairman.

**Committee on Resolutions.**—Col. L. H. Ives and J. T. Reiman, with power to appoint a third member.

**Credentials.**—Mrs. C. A. Bullock, Mrs. R. J. Robb and Mrs. J. L. Beal.

**Club Extension.**—R. J. Robb, O. C. Kingsbury and D. M. Morrison.

**Temperance.**—D. M. Beckwith, C. P. Johnson, Mrs. L. J. Bradley, Mrs. A. Marshall and Mrs. Wm Zufelt.

The afternoon session, which opened at 1:30 p. m., was opened with music and invocation, followed by the report of the Associational Secretary, Mrs. C. P. Johnson, of Hadley and Elba Farmers' Club. The introductory portion of her paper relating to the prosperity of the Club during the past year follows:

Again we are reminded of the shortness of time as we realize that one year instead of a few weeks has passed since we last assembled in our annual meeting, December 5-6, 1911.

The political campaign with its many issues is over and the country regaining normal condition, though Michigan women will "fight it out on this line if it takes all summer."

The farmer has fought a hard game with the elements and while some sections report bountiful harvests others tell of disastrous floods, ruined crops and general discouragement.

However, "All is well that ends well," and the Farmers' Clubs of Michigan are to be congratulated on their pluck, enthusiasm, and prosperity during 1912.

January 1 there were listed 115 Clubs from thirty counties, Milbrook township, Mecosta county; Broomfield, Isabella county, disbanded in 1910; Oxford, Oakland county, Twentieth Century, Jackson county; Jolly, Saginaw county; Dundee, Monroe county, and probably Ross and Charleston are dead leaving 108 plus the six new ones, Clover Leaf, Charleston township, Kalamazoo county, Progressive, Hillsdale county, Greenbush, Gratiot county, Wexford Boys' Agricultural Club and Watervliet, making 114 from 28 counties at present.

The organization of a new Club in Lapeer county is reported.

Charleston township, Litchfield and Progressive Clubs have already joined the State Association and we trust the others will do likewise.

Your secretary has failed in all her attempts to reach Northville, Livingston county, Garfield, Bay county, Exeter and Ash, Monroe county, Clyde and Grant, St. Clair county, Liberty, Jackson county, Pine River, Gratiot county, and Wise, Isabella county. Any information concerning any of them will be gratefully received.

Many requests for copies of the constitution and by-laws, information on organizing local Clubs, have been answered promptly, and we note with pleasure the increasing popularity of the movement as social, co-operative, and educational factors of rural life.

The Wexford County Boys' Agricultural Club is a wide-awake organization, certain to leave a lasting influence on the community. The Aurd District Agricultural Club, of Calhoun county, began its work in 1910 and is still hustling for its motto:

Work makes the man,  
Want of it the chump,  
The man who wins  
Takes hold, hangs on, and humps,  
allows no shirking.

The boys' corn contest, conducted by Ingham County Club, was very successful in enthusiasm and corn yield.

Accounts of these Clubs may be found in Michigan Farmer issues of Feb. 17, Nov. 2-16, 1912, and are well worth reading.

Charleston Township Club organized a Junior Club and expects good results.

Requests for song books for club use were numerous and samples are on the desk for your inspection.

The work of the last year has been much easier, owing to increased familiarity with the work and elimination of the advertising feature.

The balance of the secretary's report was devoted to the details of the work of her office during the past year and an account of the four meetings of the executive committee held during the year. This report was such as to impress the delegates present with the serene nature of the secretary's work and the extent to which they are indebted to her for the success of the organization.

Following the secretary's report and another musical number, Mrs. M. C. Spencer, state librarian, gave a talk on the traveling library, which should result in many delegates taking back to their local Clubs the idea that much benefit could be gained to the organization by making use of the state traveling libraries which are selected with a special view to the class of readers to whom they go.

At this point occurred a transposition in the program, Prof. R. S. Shaw, of M. A. C., addressing the Club on his topic, "Agricultural Extension Work," in place of Dr. Eben Mumford, who was to talk on "One Phase of Rural Development," and who addressed the meeting at a later date. After an excellent reading by Miss Alta Sackett, of Eckford Farmers' Club, Mr. J. F. Rieman, of Flint, gave an address on "Modern Methods of the Modern School," in which he advocated a different method of selecting school commissioners in order that men of merit might be longer retained in office.

### Tuesday Evening Session.

The evening session was opened by music rendered by the Industrial School boys, and address of welcome delivered by Rev. Williamson, who acted for Governor Osborn, who was unable to be present. This address was ably responded to by T. H. Townsend, of Essex Farmers' Club.

Next came the president's address. Unfortunately, space will not permit the publication of the president's address in full in this issue. Briefly summarized, after extending a cordial greeting to the delegates and visitors present, President J. D. Leland at once devoted himself to an analysis of present conditions affecting Club people and the making of suitable recommendations for their improvement. He denounced in no uncertain words the pernicious influences of the liquor interests in Michigan politics. While President Leland declared that he believed the liquor question to be the greatest moral as well as financial question which should engage the attention of the farmers as well as very other class of American citizens, he did not neglect to touch upon other questions of importance to farmers in general and Club members in particular.

He referred to the inadequate and unstable nature of the present state organization of Farmers' Clubs and referred to the action taken at the last meeting by which a committee was appointed to draft proposed amendments to correct this difficulty. The amendments, which were the result of this committee's deliberations, were strongly advocated by President Leland and the delegates were urged to adopt them, which they later did with slight amendments.

He touched upon the question of co-operation and urged Club members to make their organization the nucleus of co-operative work. Touching upon the banking question, President Leland stated that he could see no necessity for farmers' co-operative banks such as are being quite extensively recommended at the present time for the reason that in his belief the added benefit derived therefrom would not compensate for the time, trouble and responsibility necessitated thereby. He did advocate, however, the government guarantee of bank deposits, properly regulated and handled, stating that after years of thought and investigation upon the subject he is convinced that such a move would not only be of great benefit to the farmers but to every other class of people and all banks outside of great financial centers.

The question of farm taxation came in for its share of attention, but as this subject was to be touched upon in the program by Hon. James N. McBride, of Shiawassee county, it was passed over hurriedly. President Leland strongly recommended the effort of Prof. French of M. A. C., in the establishment of Junior Agricultural Clubs throughout the state and stated that he believed this movement to be one of the most important

and beneficial in its results of any movement in the interests of the highest development of agriculture and the raising of the standard of its popularity in the minds of the young people of our state. After noting that there were many other questions of importance which might be mentioned, many of which, however, were to be discussed during the meeting, President Leland closed his very comprehensive and well received address.

Other numbers of the evening program were readings by Hazel Belle Crosby, of Ceresco Farmers' Club, and an illustrated lecture by O. H. Benson, of Washington, D. C., on the subject of Boys' and Girls' Clubs as they have been developed in the south under government auspices. Through the facts presented and the pictures shown upon the screen, Mr. Benson impressed his hearers with the fact that much good has been accomplished through these Clubs and that great benefit would result from a similar organization of the boys and girls of Michigan along the lines recommended by the Department of Agricultural Education of M. A. C.

### Wednesday Morning Session.

The first two hours of the Wednesday morning session were devoted to a conference of local Club members, always an interesting feature of the program. Something as to the reports of the various delegates regarding the work of their Clubs will be given in future issues. Immediately upon the calling of the regular session the reports of the committees were received and acted upon with the exception of the report of the committee on State Affairs, which reports were adopted as follows:

#### National Affairs.

1. Resolved, That we again urge upon our National Congress the propriety of adopting the resolution, submitted to it by this Association one year since, designating Sept. 30, as Memory Day, to be devoted to the sacred purpose for which it is intended.

Resolved, That we congratulate the country upon the adoption of a parcels post, and believe that any imperfections in the system may best be rectified after they have become manifest by trial.

2. That we favor national aid for the public highways.

3. That we favor such amendment to the Interstate Commerce law as will stop the shipping of intoxicating liquors into dry territory.

4. That we heartily approve of the policy of conservation of all national resources for the benefit of the whole people.

5. That we urge the co-operation of national and state forces in the suppression of the white slave traffic and the social evil.

6. That we urge upon our governor the use of all possible influences to bring about the era of universal peace.

7. That we urge the immigration bureau to increased endeavor to divert the stream of immigration from our cities to the rural sections, where additional labor is so urgently needed.

Whereas, the chief engineer employed by the United States and working (as should be supposed), for the whole people, asks for an appropriation of \$56,766,992 for the so-called benefit of the army for river and harbor work.

Therefore be it resolved, that we here assembled, representing the farmers of the state of Michigan, ask of our representatives and senators in Congress, that the item of \$1,475,000 for St. Mary's river be so amended, if it is possible by their efforts, to transfer \$1,000,000 of said amount to national or state good roads fund, and that if the \$1,000,000 is needed to deepen the channel of St. Mary river that the same be raised by the parties directly interested, viz., the iron and copper mine owners, the steel trust, etc.

#### State Affairs.

We ask that provision be made for a general utilities commission by enlarging the scope, power and name of the State Railway Commission to include the supervision of public utilities and corporation service. A single commission with enlarged scope being more effective than a multiplicity of commissions.

We favor state supervision of all banks. A private bank without public control should be prohibited. We favor a law that will compel all offerings of stocks and bonds to be submitted to the scrutiny of a state bank commissioner and making a penal offense to offer for sale such, unless officially examined and authorized.

We favor the initiative, referendum and recall of all officials.

We ask for a specific tax on automobiles, based on their horsepower, and this tax to be used for highway purposes. And the restriction of the public highways for use in testing motor vehicles without adequate compensation therefor.

We ask for the abolition of offices where modern conditions has rendered the duties obsolete, as in the case of salt and oil inspection.

We favor the establishing the office of agricultural commissioner and uniting all the varied interests of agriculture under a single head. At present the state dairy and food commissioner, state live stock sanitary commissioner, horticultural officials, fertilizer analysis officials are separate operations without a common head or unity of purpose.

The multiplicity of petty lawsuits has turned our courts from the distribution of justice to the wrangling over cases

where the merits are insignificant as compared to the cost. We therefore ask for an adequate commission to decide as to the necessity of legal processes at public expense. Also that personal damage cases be submitted to arbitration before legal processes are permitted, and that nine jurors be permitted to declare a verdict. Also, that appeals from the justice courts involving sums of less than \$100 be prohibited or referred to arbitration.

The necessity of making provision for prisoners owing to the inability of the Detroit House of Correction to longer care for short-term prisoners, is a state-wide problem. To solve this we ask the legislature to consider the success of the Colorado plan, only modified to suit Michigan conditions, by utilizing the labor of prisoners in clearing up land and draining land to provide homes and farms out of non-utilized state lands, with some compensation for the prisoners for efficient work, or to be employed in the construction of highways.

Resolved, That the apparent defeat of the constitutional amendment granting woman's suffrage demands the attention of the public to the situation whereby a "special interest" attempts to deprive the elective franchise of a great moral force. We ask that the power of the state be used to determine that an honest count be made and that if the record is so clouded that the true will of the people be obtained by the legislature re-submitting the question of woman's suffrage at the next election.

Resolved, That we endorse the movement made by the administration of Gov. Osborn to adequately analyze the complex tax system of Michigan and that the general property tax system, while adapted to a primitive state is not now equitable nor possible of a just distribution of burden. We ask our legislators to investigate the Massachusetts and Wisconsin plans of taxation with a view to their adaptation to Michigan needs, and also a provision for property registration.

We favor a simplified primary law, the Australian form as adopted by several western states. Also a complete and full corrupt practices act.

We ask for a law prohibiting or the manufacture or sale, or keeping in stock of cigarettes, making the smoking of cigarettes in public a misdemeanor punished by law.

We favor medical certificates of health and mental efficiency as a pre-requisite to the issuing of marriage licenses.

The national government has successfully dealt with the white slave traffic under the Mann act, while state enforcement of state laws are not equally effective. We favor a law similar to the Kenyon act of Iowa, which, by judicial decree, establishes the reputation of a house and establishes a strict quarantine of the place and publishes the name of the owners of the property.

We ask that provision be made by law that will permit any pupil in Michigan to have free tuition in any high school in the state and that the primary school fund be used to compensate the respective school districts at a rate not to exceed the per capita cost of instruction in said school. We also recommend that the tuition fees for non-resident students in our state educational institutions be increased to meet the actual per capita cost of instruction in said institutions.

We favor free text books for all schools up to and including the eighth grade.

Resolved That in case of the resubmission of the woman suffrage amendment to the state constitution at the spring election, we, the State Association of Farmers' Clubs, recommend that an address to the voters be prepared and each Club member be made to feel that the necessity of securing the largest possible vote and that the local Clubs be made centers of work for securing an affirmative vote.

We favor the closing of shows and theaters on the Sabbath day, by statutory law.

We ask for a law for the repeal of the act creating the Michigan Bonding Co., which may well be called the incorporation of the forces of evil to hinder law enforcement.

We favor a free tuition law.

#### Club Extension.

We would recommend to the Farmers' Clubs of the State Association, that they co-operate with Mr. W. H. French in the establishment of Junior Clubs over the state. These are to be under the general supervision of the county school commissioner, but we, as Club members, can do much in assisting him.

We would call to your attention the corn clubs that have been conducted over our state and urge upon you the advisability of taking up such work among your boys. These could be worked out very nicely in connection with the Junior Clubs.

We would recommend for your consideration the planning of programs that shall study some subjects throughout the year. Get a traveling library from the state library and then plan a systematic study of one or two farm topics.

Club fairs have proven very profitable in many Clubs.

We would recommend that we use our influence to study through our attorneys such laws as those relating to temperance, foul farm seeds, and highway and telephone laws as brought to our attention by Hon. Lawton Hemans. Because many of our executive officers hands are tied until complaint of violation is made.

Perhaps we have not taken this subject as was intended. Club extension means primarily new Clubs but your committee feel that there are other things that can extend our Club influence besides new Clubs.

We believe that a Farmers' Club in a community should be doing things for that community that shall make for better farming, better homes, and better individuals.

(Continued next week.)



## MARKETS

## NOTICE.

As will be observed from the following columns a change is made in the classification of the markets in this week's issue of The Farmer. Instead of arranging the reports as to places, they are now arranged according to products, all the market news and quotations for each product being collected under one head. We believe this will be a convenience to our many readers, and will serve to give a more comprehensive idea of the general market for any product.

## GRAINS AND SEEDS.

December 11, 1912.

**Wheat.**—This market is lower and is slightly weaker than a few days ago. The trade is, however, occupying a stronger position than most dealers feel it should have. The government crop report, heavy sales by farmers, the large increase in the visible supply and the splendid condition of the growing plant all seem to favor lower values than are now ruling. In spite of this, when an attempt was made to bear the market on Tuesday, it was found that a good demand for the cereal existed and the offerings were so largely bought up that the bears became frightened. The possibilities of further war trouble in Europe on an even larger scale than during recent activities give the market an uncertain stand which dealers on both sides are watching with much concern. Good houses are buying wheat. Cash demand is fair and flour trade quiet. One year ago No. 2 red wheat sold on the Detroit market at 95c per bu. Quotations are:

	No. 2	No. 1	Red.	White.	May.	July.
Thursday	1.05 1/2	1.04 1/2	1.10 1/4	.93		
Friday	1.05 1/2	1.04 1/2	1.10 1/4	.93		
Saturday	1.05 1/2	1.04 1/2	1.10 1/4	.92 1/2		
Monday	1.05	1.04	1.09 1/2	.92 1/2		
Tuesday	1.05	1.04	1.09 1/2	.92 1/2		

Chicago, (Dec. 10).—No. 2 red 99c@1.02; Dec., 83c; May, 89c; July, 86c. New York, (Dec. 10).—No. 2 red, 86c at elevator; Dec., 90c; May, 95c@95 1/2c.

**Corn.**—The corn market rules easy and lower. The movement of this grain is slow, due largely to the lightness of country offerings. Efforts by the bears at Chicago to stampede the market have thus far failed. The Detroit market is quiet, very little corn changing hands. One year ago the price for No. 3 corn was 61 1/2c per bu. Detroit quotations for the week are:

	No. 3	No. 3	Yellow.
Thursday	49 1/2	50 1/2	
Friday	49 1/2	50 1/2	
Saturday	49	50	
Monday	48 1/2	49 1/2	
Tuesday	48	49	

Chicago.—No. 3 yellow, old 57c; new 45 1/2@46c; Dec., 47c; May, 48c; July, 49c.

**Oats.**—Further improvement is noted in this market during the past week. There is a good demand and the receipts from local elevators are only moderate. In spite of the bearish tendency of the corn and wheat markets, oats have been able to advance. One year ago the price for standard oats on the Detroit market was 50 1/2c per bu. Detroit quotations are:

	Standard.	White.
Thursday	37	36
Friday	37	36
Saturday	37	36
Monday	37	36
Tuesday	37	36

Chicago.—No. 2 white, 34 1/2@35c; Dec., 32 1/2c; May, 32c; July, 33c.

**Beans.**—This market is lower. Receipts are increasing with the demand holding about steady. It is probable, however, that little business in dealing will be done until after the holidays. Quotations:

Detroit.—Immediate shipment, \$2.15; prompt shipment, \$2.13; Dec. and Jan., \$2.10.

Chicago.—Hand-picked choice, \$2.55@2.65; prime, \$2.45@2.50; red kidneys, \$2.30@2.40 per bu.

**Clover Seed.**—This market is firm and quiet, demand steady and offerings are small. Quotations:

Detroit.—Prime spot and Dec., \$11; prime alsike, \$13.

Toledo.—Prime cash for Dec., \$11.10; Feb., \$11.20; alsike, prime, \$12.75; March, \$12.80.

**Rye.**—This deal is dull with practically no sales being made. Quotations:

Detroit.—Cash, No. 2, 62c.

Chicago.—No. 2, 60@63c.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in 1/2 paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.60; second, \$5.30; straight, \$5.20; clear, \$4.90; spring patent, \$5.10; rye flour, \$4.80 per bbl.

**Feed.**—Detroit jobbing prices in 100-lb. sacks are as follows: Bran, \$23; coarse middlings, \$24; fine middlings, \$29; cracked corn and coarse corn middlings, \$29; corn and oat chop, \$22 per ton.

**Hay.**—Carlots, on track, Detroit: No. 1 timothy, \$16.50@17; No. 2, \$15@15.50; light mixed, \$15.50@16; No. 1 mixed, \$14.50@15.

Chicago.—Choice timothy, \$14.20; No. 1, 16@17.50; No. 2 and No. 1 mixed, \$14@15; No. 3 and No. 2 mixed, \$10@13; clover, \$7@12.

New York.—Market steady; standard \$22 per ton; No. 1, \$22.50@23; No. 2, \$21; No. 3, \$18@19; No. 1 mixed, \$18@20; No. 1 clover, \$18.

**Straw.**—Car lot prices on wheat and oat straw on Detroit market are \$9@10 per ton.

Chicago.—Wheat straw, \$6.50@7; oat straw, \$7@7.50; rye straw, \$7@7.50.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Market firm at the prevailing prices. Jobbing prices in the Detroit market are: Fancy creamery, 36c; firsts, 33c; dairy, 22c; packing, 21c per lb.

Elgin.—Market firm at 35c.

Chicago.—Feeling easy with prices favoring buyers. Smaller consumption makes trade slow, the late high prices having driven consumers to the use of substitutes. Extra creamery, 35 1/2@36c; extra firsts, 34@35c; firsts, 32@33c; seconds, 27@28c; dairy extras, 32c; firsts, 28c; seconds, 26c; packing, 15@23c as to quality.

New York.—Market weak. Creamery, extras, 37 1/2@38c; firsts, 34@36 1/2c; seconds, 30@33c; thirds, 27@29c; state dairy best, 34@35c; good to prime, 30@33c; common to fair, 24@28c; packing, 20@24c as to quality.

**Eggs.**—Demand for fresh eggs better than supply in the Detroit market. Current receipts, candled, cases included, selling at 30c per dozen.

Chicago.—Market easy for both storage and fresh stock. Quality of eggs shipped in as fresh so variable as to cause wide range of prices. Miscellaneous lots, 20@27c, cases included; cases returned, 20@26c as to quality; ordinary firsts, 24c; firsts, 26@27c per doz.

New York.—Market unsettled. Fresh gathered firsts, 28@30c; seconds and lower grades, 21@27c; western gathered whites, 30@38c.

**Poultry.**—Detroit. Trade is steady. Offerings are small. Demand fair. Dressing—Spring chickens, 13@15c; hens, 12@14c; old roosters, 10@11c; turkeys, 1@19c; ducks, 17@18c; geese, 13@14c per lb. Live—Spring chickens, 13@14c; hens, 12@13c; No. 2 hens, 9c; old roosters, 9@10c; turkeys, 17@19c; geese, 13@14c; ducks, 15@16c per lb.

Chicago.—Market steady. Receipts are smaller than a week ago. Demand is fair. Turkeys, good weight, 15c; others, 10c; fowls, good, 12c; spring chickens, 12 1/2c; ducks, large, fat, 13c; do., Indian runners, 12c; geese, full feathered, 12c; do., plucked, 8@10c per lb.

New York.—Firm for dressed. Fresh killed western chickens, 13@17 1/2c; fowls, 12@14 1/2c; turkeys, 13@19c per lb.

**Cheese.**—Prices are ruling on a rather high basis and most dealers are only taking enough to supply current demands. Quotations:

Detroit.—Wholesale lots: Michigan flats, 16 1/2@17c; New York flats, 18 1/2@19c; brick cream, 17 1/2@18c; limburger, 17 1/2@18 1/2c; imported Swiss, 28@29c; domestic Swiss, 21@22c; block Swiss, 19 1/2@20c per lb.

Chicago.—Twins, 15c; daisies, 16@16 1/2c; young Americas, 16@16 1/2c; limburger, new, 15@15 1/2c; brick, choice, 15 1/2c per pound.

**Veal.**—Detroit. Steady, fancy, 12@13c; choice, 10@11c per lb.

Chicago.—Quiet. Fair to choice, 8@110 lbs., 12@13c; extra fancy stock, 13 1/2c; fair to good, chunky, 10 1/2@11 1/2c per lb.

## FRUITS AND VEGETABLES.

**Apples.**—Market is slow and prices remain unchanged. Detroit quotations are: Baldwin, \$2.25@2.50; Greening, \$2.50@2.75; Spy, \$2.75@3; Steele Red, \$3@3.50.

**Grapes.**—Detroit. Catawbas, 15c per 4-lb. basket.

**Potatoes.**—Detroit.—Market is fairly active, with no change in values. Car lots are moving slower than smaller quantities. Michigan stock, in car lots, 53c in sacks, 48c in bulk.

Chicago.—Market healthy and about steady, with receipts exceeding those of a week ago but readily absorbed by the trade. Michigan Rurals and Burbanks are selling at 40@48c for fair to good and 49@52c for fancy sacked.

New York.—Weak and in increased supply. Western offerings, \$1.25@1.75 per bag.

**Onions.**—This market is in bad condition owing to the large crop.

Detroit.—55c per bu.

New York.—Western, per crate, for white, 40c@51; 100-lb. bags reds and yellows, 75@80c.

Chicago.—Weak. Home grown, 40@55c per 65-lb. sack.

**Cabbage.**—All the large markets are overstocked and buyers are making their own prices. Outlook is rather dark.

Detroit.—Per bbl., \$1@1.25.

Chicago.—Holland bringing \$4@6 per ton. Red cabbage is scarcer and quoted at 75c@81c per bbl.

## MISCELLANEOUS.

**Wool.**—The feeling in this market is firm. Supplies are short and demand active. Houses are cleaning up bins early. Quotations:

Chicago.—Medium, unwashed, 24@26c; coarse do., 21@23c; tubs, washed, 27@35c.

Boston.—Mich. fine, 20@21c; do., 1/2-blood, 28@29c; do. 3/4-blood combing, 29@30c per lb.

**Provisions.**—Market is only fairly active. Quotations:

Detroit.—Family pork, \$23@24; mess pork, \$20; clear, backs, \$22@24; hams, 16@17c; briskets, 11 1/2@12 1/2c; shoulders, 14c; picnic hams, 13 1/2c; bacon, 17@19c; pure lard in tierces, 12c; kettle rendered lard, 13c per lb.

Chicago.—Mess pork, \$17.75@18; lard, \$11@11.05; short ribs sides, \$10@10.62 1/2.

**Honey.**—Detroit.—Steady. Choice to fancy comb, 16@17c; amber, 14@15c; extracted, 9 1/2@10c per lb.

## Grand Rapids.

Dealers are paying the country trade 30c for No. 1 dairy butter and 30c for fresh eggs. Live poultry delivered is bringing the following prices: Hens, 10c; turkeys, 15c; ducks, 10c; geese, 8c. Dressed hogs are worth around 9c. Beans, both white and red, are quoted on \$1.80 basis, but there are reports of red kidneys selling at \$2.10 at some nearby stations. Wheat is quoted at \$1.05; corn, 49c; oats, 24c. Hay is selling at \$12@15 per ton.

## THE LIVE STOCK MARKETS.

## Buffalo.

December 9, 1912.

(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, New York).

Receipts of stock here today as follows: Cattle, 240 cars; hogs, 125 double decks; sheep and lambs, 90 double decks; calves 600 head.

With 250 cars of cattle on our market here today, and with the weather cold and freezing, our market was strong and from 10@15c per cwt. higher. With an active market, about everything was sold at the close, and the close being about steady with the opening.

We quote: Best 1,350 to 1,500-lb. steers \$9@9.50; good to prime 1,200 to 1,300-lb. do., \$8@8.50; good to prime 1,100 to 1,200-lb. do., \$7.75@8; coarse, plain, 1,100 to 1,200-lb. do., \$7.25@7.50; medium butcher steers, 1,000 to 1,100, \$6.75@7.25; butcher steers, 950 to 1,000, \$6.40@7; light butcher steers, \$5.75@6.25; best fat cows, \$6@6.50; butcher cows, \$5@5.50; light butcher cows, \$4.25@4.50; cutters, \$3.75@4; trimmers, \$3.50@3.75; best fat heifers, \$7@7.50; medium butcher heifers, \$5.75@6.25; light butcher heifers, \$4.75@5.25; stock heifers, \$4@4.25; best feeding steers dehorned, \$6.50@7; fair to good stockers, \$5.25@5.50; light common stockers, \$4.50@4.75; prime export bulls, \$6@6.25; best butcher bulls, \$5.50@5.75; bologna bulls, \$4.50@5; stock bulls, \$4.50@5; best milkers and springers, \$65@75; common to fair kind, \$40@50.

We had 125 loads of hogs on sale today. Light receipts and a stronger market reported at all western points put a little spirit in the trade; the opening sales were generally 5@10c higher on the best grades, while pigs were from 20@30c higher than Saturday's close. It was generally a one-priced market for the best grades, \$7.90 taking the bulk. Pigs and lights, \$7.75; roughs, \$6.75@7; stags, \$6@6.50. The close was slow and 5c lower, and several loads going over unsold.

The sheep and lamb trade was fairly active today, with prices a quarter higher than the close of last week; most of the choice lambs selling for \$8.35; yearlings, \$5.50@6.50. Look for steady prices the balance of the week if the supply is not too heavy.

We quote: Choice lambs, \$8.25@8.35; cull to fair do., \$5.50@8.15; yearlings, \$5.50@6.50; bucks, \$2.50@3.25; wethers, \$4.50@4.75; handy ewes, \$4@4.25; heavy ewes, \$4@4.10; cull sheep, \$2.50@3.25; veals, choice to extra, \$10.50@12.50; fair to good, \$7.50@11; heavy calves, \$4.50@6.

## Chicago.

December 9, 1912.

Received today . . . 20,000 35,000 40,000  
Same day last year . . . 28,732 42,038 37,070  
Received last week . . . 75,702 187,045 157,074  
Same week last year . . . 60,119 172,488 134,012

Cattle opened this week in an active manner after early slowness, buyers finding that owners were firm as a rock in their views, and sales of steers and butcher stock were largely 10@15c higher, the greatest strength in steers being shown in the middling kinds and pretty good lots, rather than in the choicest beeves. Eleven cars of Canadian range cattle were among the arrivals. Hogs were active and 10c or more higher, with sales mainly at \$7.40@7.85. Hogs received last week averaged 226 lbs., compared with 213 lbs. one year ago, 225 lbs. two years ago and 218 lbs. three years ago. Sheep and lambs open this week active and 10@15c higher for the better class, prime lambs reaching \$7.90. Some belated range flocks, arrived mostly on the feeder order.

Cattle were marketed in greatly increased numbers last week, the International Live Stock Exposition swelling the offerings, as is the case every year. Of course, the show cattle that won prizes, as well as others that were exhibited there, sold in a class by themselves, as did the show feeder cattle, and the fat beeves intended for the show that were turned down by the weeding committee also sold above the general market. The grand champion car lot of yearling steers went to an eastern buyer at 14c per lb., compared with 15 1/2c a year ago, and the champion steers of the show brought 50c per lb., against 90c a pound paid a year ago for the champion. The general cattle market, aside from fancy stock, was so overloaded that prices suffered declines of fully 25@40c per 100 lbs. on an average, the poorer lots of grass-fed steers going at \$5.80@7.50, with sales of short-fed lots at \$7.60@8.60. The choicest lots brought \$10@11.25, the steers going at \$10.75 and over being mainly lots rejected by the show managers. Butcher stock, like everything else not strictly fancy, had a full part in the downward movement, cow and heifer sales being made at \$4.30@6.75, although sales of limited numbers of choice to extra fine heifers took place at \$7@8.50. The bulk of the beef steers crossed the scales at \$7.35@10, the higher average than during the previous week being accounted for by the choicer average grade of the offerings. Cutters went for \$3.60@4.25, canners at \$2.75@3.50 and bulls at \$4@7.25. The stocker and feeder trade was fairly large, with lower average prices except for choice lots, stockers going at \$4.25@6.75 and most of the feeders selling at \$6.25@7.75, with a sale of 60 head of fancy 1,240 to 1,275-lb. Hereford feeders to an Ohio man at \$8. Calves sold freely on a basis of \$4@10.60 per 100 lbs., and there was a limited trade in milch cows at \$40@100 each, few prime cows being offered.

Hogs were marketed last week with a great deal of freedom, the Monday receipts aggregating 53,344 head, and a good many visitors to the big stock show brought some hogs with them. Little change was seen in the general features of the market, and as the eastern shipping demand was still no more than moderate, the Chicago packers were in a position to hold prices down. Eastern packers are still receiving a great many

hogs from their home territory, so that they are not dependent upon the Chicago market for supplies at this time. The hogs arriving were all needed, however, for there is all the time the biggest kind of consumption of fresh meats, while cured meats and lard are having large sales constantly. Stocks of provisions held in Chicago warehouses on Dec. 1, as officially reported, showed fair decreases in stocks of old product made prior to October 1 and small increases in product made since that date. Total cuts of all meats decreased about 2,800,000 lbs. during November. Strong weight barrows still top the hog market, with prime light hogs fetching a moderate discount. Hogs sold at the close of the week at \$7.25@7.75, being a little lower than a week earlier, pigs fetching \$5.75@7.25 and stags \$7.60@8, with boars going at \$2.75@4.

Sheep and lambs were marketed liberally last week, and the show exhibits were the highest in quality ever seen. There was weakness in prices part of the time, especially for consignments that were off in quality, but the market was on the whole a very good one for owners of fat flocks, ruling decidedly higher than a month earlier, as well as much higher than a year ago. Existing conditions are regarded as highly promising for fat live muttons, as well as for fat beeves and choice hogs, and the great abundance and cheapness of feeds should induce stockmen to take the utmost pains to finish off their stock carefully. As for feeder lambs, there is an insatiable demand, and limited offerings brought a boom in prices last week. When the week closed prices for most kinds of sheep and lambs were as high as a week earlier, with feeding lambs higher at \$6.25@7.10. The extreme range of prices for lambs stood at \$5@7.70, with a top at \$7.75 for the week. Yearlings were salable at \$5.85@6.50, wethers at \$4@4.65, ewes at \$2.50@4.25 and bucks at \$2.50@3.50. Feeders paid \$4.50@5.25 for yearlings, \$3.50@4.25 for wethers and \$3@3.60 for ewes.

## NATIONAL CROP REPORT.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture, estimates from the reports of correspondents and agents of the Bureau, as follows:

**Winter Wheat.**—Area sown this fall is 2.5 per cent less than the revised estimated area sown in fall of 1911, equivalent to a decrease of 828,000 acres, the indicated total area being 32,387,000 acres. Condition on December 1 was 93.2 against 86.6 and 82.5 on December 1, 1911 and 1910, respectively, and a ten-year average of 89.9.

**Rye.**—Area sown this fall is 1.4 per cent less than the revised estimated area sown in fall of 1911, equivalent to a decrease of 35,000 acres, the indicated total area being 2,443,000 acres. Condition on December 1 was 93.5 against 93.3 and 92.6 on December 1, 1911 and 1910, respectively, and a ten-year average of 93.2.

## MICHIGAN CROP REPORT.

**Wheat.**—The condition of wheat as compared with an average per cent is 90 in the state and southern counties, 88 in the central counties, 91 in the northern counties and 97 in the Upper Peninsula. One year ago the per cent was 86 in the state, 83 in the southern counties, 88 in the central counties 92 in the northern counties and 94 in the Upper Peninsula. The total number of bushels of wheat marketed by farmers in November at 95 flouring mills is 96,695 and at 75 elevators and to grain dealers 60,663 or a total of 157,358 bushels. Of this amount 87,827 bushels were marketed in the southern four tiers of counties, 52,658 in the central counties and 16,873 in the northern counties and Upper Peninsula. The estimated total number of bushels of wheat marketed in the four months, August- November, is 2,250,000. One hundred mills, elevators and grain dealers report no wheat marketed in November.

**Rye.**—The condition of rye as compared with an average per cent is 92 in the state and northern counties, 93 in the southern counties, 91 in the central counties and 96 in the Upper Peninsula. One year ago the per cent was 88 in the state and central counties, 85 in the southern counties, 93 in the northern counties and 96 in the Upper Peninsula.

**Fall Pasture.**—The condition of fall pasture as compared with an average per cent is 98 in the state, 97 in the southern and central counties, 99 in the northern counties and 102 in the Upper Peninsula.

**Live Stock.**—The condition of live stock throughout the state is 96 for horses, cattle, sheep and swine.

The International Live Stock Exposition is expected to result in a further awakening of interest in high-class breeding in the corn belt and to bring about the improvement of live stock, and there is certainly plenty of room for improvement in breeding, as well as in scientific feeding. In recent years better sires and dams have been used more extensively on farm and ranch than ever before, and many of them were the offspring of winners at the International shows. The International has been spoken of as the farmer's post-graduate course and the boy's primary stock school.

There has never been such a scarcity of thin old cows on the hat-rack order suited for canning purposes as this season, and a short time ago one of the Omaha canning houses was compelled to close down for lack of material. The Chicago canning houses are still forced to scour the country in search of canner cattle to keep their forces busy. Numerous poor specimens show up in the Chicago market at times, and many of such cows fail to pass the federal government inspectors and are condemned to go to the tanks.



## THIS IS THE LAST EDITION.

In the first edition the Detroit Live stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

## DETROIT LIVE STOCK MARKETS.

## Thursday's Market.

December 12, 1912.

## Cattle.

Receipts, 1,858. Cows and bulls strong; other grades 10@20c higher than last week.

We quote: Extra dry-fed steers, \$9@12; steers and heifers, 1,000 to 1,200, \$7.50@8; do. 800 to 1,000, \$6.50@7.25; do. that are fat, 500 to 700, \$4.50@5; choice fat cows, \$5.50@6.25; good do., \$4.50@5; common cows, \$3.50@4; canners, \$3@3.50; choice heavy bulls, \$5.50; fair to good bolognas, bulls, \$4.50@5; stock bulls, \$3.75@4.25; choice feeding steers, 800 to 1,000, \$5.50@6.25; fair feeding steers, 800 to 1,000, \$5@5.50; choice stockers, 500 to 700, \$5@5.50; fair stockers, 500 to 700, \$4@4.75; stock heifers, \$3.75@4; milkers, large, young, medium age, \$4.50@7.5; common milkers, 30@40.

Cattle market closed 15@25c higher than last week on all grades but bulls and calves.

Bishop, B. & H. sold Mich. B. Co. 30 steers av 860 at \$6.60, 10 av 717 at \$5.50, 10 butchers av 692 at \$4.25; to Bresnahan 2 cows av 875 at \$3.75, 1 do weighing 950 at \$4.75, 5 av 988 at \$4.50, 6 av 908 at \$3.85, 5 av 1000 at \$3.85, 4 av 900 at \$3.75, 3 av 907 at \$3.85; to Parker, W. & Co. 26 steers av 675 at \$5.75, 10 do av 1487 at \$10; to Newton B. Co. 30 butchers av 733 at \$5.25, 1 cow weighing 1020 at \$3.50, 13 do av 889 at \$3.75, 15 do av 807 at \$3.80; to Goose 20 do av 832 at \$4.25, 9 do av 900 at \$4.25; to Cooke 2 steers av 1335 at \$8.50; to Hammond, S. & Co. 5 cows av 1116 at \$4.50; to Parker, W. & Co. 2 bulls av 1110 at \$5; to Newton B. Co. 8 butchers av 705 at \$5, 1 heifer weighing 750 at \$3.50, 11 butchers av 800 at \$6, 14 do av 560 at \$4.75, 4 cows av 907 at \$3.75, 4 do av 982 at \$4.75, 2 do av 1185 at \$5, 25 butchers av 706 at \$4.75, 2 cows av 1065 at \$3.85, 2 heifers av 900 at \$5.70, 4 do av 600 at \$5, 9 cows av 1005 at \$4.25, 6 butchers av 706 at \$5.50; to Gerisch 22 steers av 960 at \$7.50; to Bresnahan 13 cows av 907 at \$3.75; to Rattkowsky 4 do av 970 at \$4.50.

Spicer & R. sold Sullivan P. Co. 1 heifer weighing 780 at \$6.25, 8 steers av 907 at \$7, 3 do av 700 at \$5.50; to Bresnahan 2 cows av 810 at \$3.65, 9 do av 902 at \$3.65, 13 butchers av 545 at \$4.50, 1 cow weighing 790 at \$4; to Robins n 5 feeders av 704 at \$6, 4 stockers av 510 at \$5.25; to Mich. B. Co. 1 cow weighing 1030 at \$5.25, 1 do weighing 1230 at \$4.75, 3 steers av 800 at \$6.10.

Roe Com. Co. sold Bresnahan 6 cows av 770 at \$3.75, 5 do av 398 at \$3.75, 5 do av 976 at \$3.85, 14 do av 850 at \$3.70; to Newton B. Co. 10 do av 851 at \$4.75, 15 butchers av 643 at \$4.85, 5 do av 788 at \$4.40, 18 do av 863 at \$5.25, 13 cows av 970 at \$3.75; to Thompson Bros. 1 bull

weighing 1270 at \$5; to Hammond, S. & Co. 1 steer weighing 1350 at \$8.25; to Kamman B. Co. 7 butchers av 750 at \$5; to Mich. B. Co. 2 do av 1005 at \$6, 36 steers av 1100 at \$9.

Haley & M. sold Robinson 7 stockers av 693 at \$5.75, 2 do av 540 at \$5.25, 5 do av 598 at \$5.60; to Mich. B. Co. 1 cow weighing 900 at \$4, 3 bulls av 573 at \$4.25, 3 steers av 980 at \$5, 9 do av 806 at \$6.50, 2 cows av 1000 at \$5, 3 steers av 927 at \$6.75, 2 butchers av 790 at \$4.75, 2 do av 850 at \$5, 6 do av 666 at \$5.60; to Bresnahan 1 cow weighing 1050 at \$3.60, 3 do av 470 at \$4, 3 do av 950 at \$3.65, 2 bulls av 470 at \$4, 5 butchers av 548 at \$4.75, 4 cows av 815 at \$3.65, 5 do av 726 at \$3.50, 5 do av 876 at \$3.75; to Cooke 6 do av 990 at \$4.80, 1 do weighing 1180 at \$4.50; to Sullivan P. Co. 3 butchers av 990 at \$5.80; to Goose 8 cows av 1041 at \$4.10; to Saparo 5 do av 916 at \$4.25; to Nagle P. Co. 2 do av 1120 at \$5.75, 3 do av 1160 at \$4.90, 1 do weighing 1180 at \$5.25; to Bresnahan 4 do av 870 at \$3.60; to Kull 2 steers av 745 at \$6, 5 do av 640 at \$5.25.

## Veal Calves.

Receipts, 399. Market strong at last week's prices. Best, \$9@11; others, \$4.50@8.50; milch cows and springers strong.

Bishop, B. & H. sold Thompson Bros. 1 weighing 110 at \$10, 2 av 150 at \$10.50, 2 av 125 at \$10.50; to Goose 12 av 130 at \$9, 2 av 225 at \$5; to Parker, W. & Co. 6 av 155 at \$11; to Hammond, S. & Co. 1 weighing 110 at \$9, 8 av 145 at \$11; to Mich. B. Co. 5 av 165 at \$10.50, 4 av 145 at \$10.50, 6 av 140 at \$10; to Rattkowsky 2 av 130 at \$10, 3 av 175 at \$6, 3 av 140 at \$10.50; to Sullivan P. Co. 8 av 140 at \$10.50, 3 av 150 at \$11, 3 av 200 at \$10.50; to McGuire 3 av 100 at \$8, 8 av 150 at \$11.

Haley & M. sold Newton B. Co. 8 av 130 at \$10, 1 weighing 230 at \$7, 4 av 155 at \$10.50, 1 weighing 150 at \$10.50, 2 av 125 at \$10.50; to Mich. B. Co. 9 av 140 at \$10.50.

Spicer & R. sold Mich. B. Co. 2 av 175 at \$10; to Hammond, S. & Co. 2 av 150 at \$11; to Burnstine 4 av 155 at \$11, 1 weighing 200 at \$10; to Goose 2 av 130 at \$9, 5 av 125 at \$7, 8 av 115 at \$9.

Roe Com. Co. sold Thompson Bros. 1 weighing 120 at \$11; to Goose 3 av 120 at \$9, 1 weighing 180 at \$6.50.

## Sheep and Lambs.

Receipts, 6263. Lambs 50 to 75c higher than last week; sheep steady. Best lambs \$8@8.25; fair to good lambs, \$6.50@7.50; light to common lambs, \$5@6; yearlings, \$4@5.50; fair to good sheep, \$3@3.75; culls and common, \$2@3.

Haley & M. sold Young 91 sheep av 85 at \$3.50; to Newton B. Co. 5 do av 95 at \$3.50, 3 do av 70 at \$2; to Nagle P. Co. 44 lambs av 73 at \$8, 122 do av 60 at \$7.5, 65 do av 65 at \$7.50, 11 do av 70 at \$8; to Hayes 36 do av 65 at \$7, 76 do av 52 at \$5.85; to Nagle P. Co. 98 do av 65 at \$7.50.

Spicer & R. sold Hammond, S. & Co. 9 lambs av 53 at \$6.50; to Sullivan P. Co. 29 lambs av 40 at \$5, 18 sheep av 125 at \$3.50, 22 lambs av 50 at \$6; to Newton B. Co. 13 yearlings av 75 at \$5.50, 13 lambs av 65 at \$5.50, 95 do av 75 at \$7.75, 21 do av 65 at \$7.25, 48 do av 60 at \$6.25; to Mich. B. Co. 70 yearlings av 125 at \$4, 54 do av 120 at \$4; to Nagle P. Co. 83 lambs av 75 at \$7.90, 5 yearlings av 110 at \$6; to Costello 14 sheep av 105 at \$3.50, 17 do av 85 at \$3, 40 lambs av 60

at \$6.75; to Parker, W. & Co. 23 do av 80 at \$8; to Nagle P. Co. 59 yearlings av 105 at \$4; to Mich. B. Co. 6 lambs av 75 at \$7.75, 21 do av 70 at \$7.65.

Roe Com. Co. sold Nagle P. Co. 60 sheep av 95 at \$3, 185 lambs av 70 at \$7.50; to Sullivan P. Co. 28 sheep av 90 at \$3.50.

Haddrell sold Sullivan P. Co. 4 lambs av 95 at \$7.50, 8 sheep av 90 at \$3.25.

Bishop, B. & H. sold Sullivan P. Co. 66 lambs av 80 at \$8, 26 do av 58 at \$6.25, 40 sheep av 110 at \$2.50, 34 lambs av 50 at \$5.75; to Young 25 sheep av 95 at \$3.25, 46 do av 80 at \$3, 20 do av 65 at \$2.50, 15 do av 100 at \$3.40, 26 lambs av 45 at \$5.50; to Thompson Bros. 50 sheep av 110 at \$3.50, 25 do av 85 at \$3.25; to Nagle P. Co. 108 lambs av 75 at \$7.75, 94 do av 70 at \$7.75, 24 sheep av 90 at \$3.25, to Hammond, S. & Co. 90 do av 125 at \$3.50; to Nagle P. Co. 59 lambs av 70 at \$8, 104 do av 80 at \$7.75; to Hammond, S. & Co. 23 yearlings av 140 at \$4, 55 lambs av 83 at \$8.25; to Young 27 do av 70 at \$7.40; to Hammond, S. & Co. 11 yearlings av 90 at \$4.50.

## Hogs.

Receipts, 7,241. None sold up to noon; looks 15@25c lower than last week; packers bidding \$7.10@7.15.

Bishop, B. & H. sold Parker, W. & Co. 2217 av 200 at \$7.25, 860 av 180 at \$7.20, 610 av 160 at \$7.15.

Haley & M. sold Hammond, S. & Co. 450 av 210 at \$7.25, 375 av 180 at \$7.15, 240 av 160 at \$7.10, 280 av 140 at \$7.

Roe Com. Co. sold Sullivan P. Co. 325 av 190 at \$7.25.

## Friday's Market.

December 6, 1912.

## Cattle.

Receipts this week, 2,668; last week, 2,662. Market opened steady at Thursday's prices. Extra dry-fed steers, \$7.50@8; steers and heifers, 1,000 to 1,200, \$6.50@7.25; do. 800 to 1,000, \$5.50@6; do. that are fat, 500 to 700, \$4.50@5; choice fat cows, \$5.50@6.50; good do., \$4.50@5; common cows, \$3.75@4.25; canners, \$3@3.65; choice heavy bulls, \$5.50; fair to good bologna bulls, \$4.50@5; stock bulls, \$3.75@4.25; choice feeding steers, 800 to 1,000, \$5.50@6.25; fair do., 800 to 1,000, \$5@5.50; choice stockers, 500 to 700, \$5@5.25; fair do., 500 to 700, \$4@4.75; stock heifers, \$3.75@4; milkers, large, young, medium age, \$4@6.5; common milkers, \$3@4.40.

## Veal Calves.

Receipts this week, 612; last week, 607; market steady at Thursday's prices. Best \$9.50@11; others, \$4@8.50. Milch cows and springers steady.

## Sheep and Lambs.

Receipts this week, 10,084; last week, 7,276; market steady at Thursday's prices. Best lambs, \$7.25@7.50; fair to good lambs, \$6.50@7; light to common lambs, \$5@6; yearlings, \$4@5; fair to good sheep, \$3.25@3.60; culls and common, \$2.75@3.

## Hogs.

Receipts this week, 10,857; last week, 10,732; market steady at Thursday's prices. Light to good butchers, \$7.50@7.60; pigs, \$6.75@7; light yorkers, \$7.35@7.50; stags one-third off.

Market Note:—There will be no market at these yards Christmas day. Anything arriving will be cared for, but the yards will be closed.

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## Bean Picking Machine

thereby securing for yourself the top price for hand picked beans.

Price \$4, f.o.b. Vassar, Mich.

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By bringing to bear upon your live stock consignments the best efforts of a selling organization developed and perfected by twenty-six years of constant study and effort.

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Just look at the lines of this Low Down Spreader. See where the wheels are located—right under the load—just where wheels should be.

The greatest weight comes on the rear wheels—giving perfect traction power without the extra heavy mud lugs that others require.

The Box is as long as any spreader built, yet the distance between the wheels is from 25 to 50 per cent less than other low down spreaders.

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Another point—the Flying Dutchman is lower behind than in front—the apron and load travel "down hill"—another light draft feature. The endless apron has 18 inches clearance between the lowest point and the ground—6 inches more than some others—some difference.

**Steel Frame—Steel Wheels—Steel Beater**

Apron runs on three sets of hardened steel rollers—absolutely no sagging. No other spreader so simple in construction—one lever operates entire machine. No other spreader so well built and strong—no other spreader so generally satisfactory to the user—"The Lightest Draft Low Down Spreader Ever Built."

We also build the **Moline Spreader** which is of the same construction but has a Return Apron.

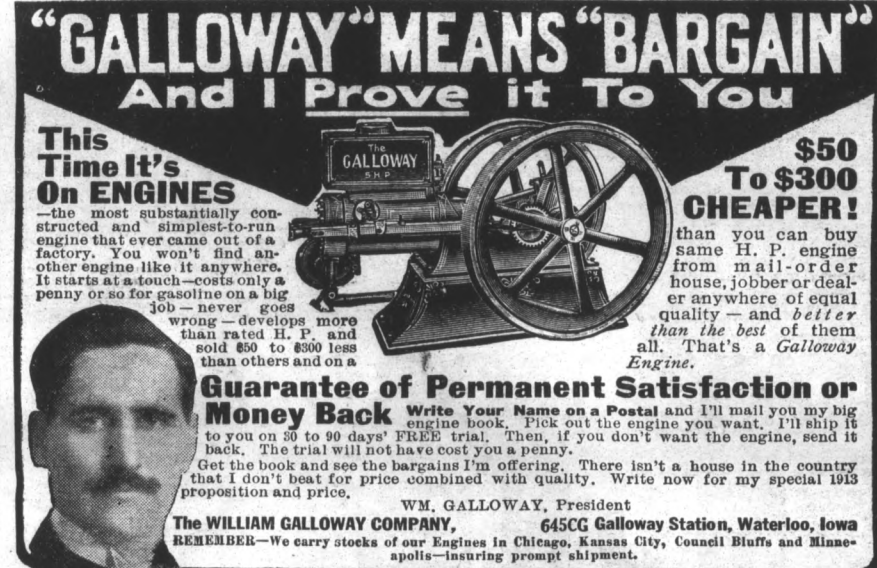
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than you can buy same H. P. engine from mail-order house, jobber or dealer anywhere of equal quality—and better than the best of them all. That's a Galloway Engine.

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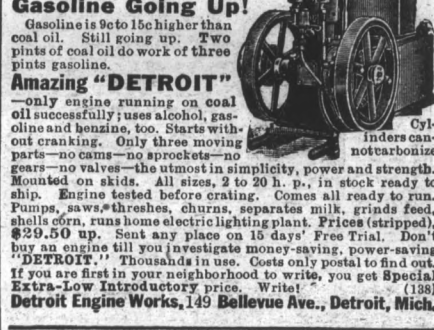
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