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\$1.00 A YEAR.
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FARM NOTES.

The Russian Thistle.

Please tell me the name and nature of inclosed weed. I find it in a piece of alfalfa sowed June 22. Bought seed of local dealer who claimed it came from Montana. If dangerous, please let me know as soon as you can, as I should like to destroy it before it seeds. The plant is one of the smallest.

Eaton Co. A. L. N.
The specimen of weed enclosed with the above inquiry was Russian Thistle. This is an annual, first introduced into the Dakotas some years ago from Russia. Its name is misleading, since it is really not a thistle at all, but a big tumble weed with sharp thorny leaves which grow as shown in the accompanying illustration. The flowers are insignificant and of a pinkish color; the stems are stiff and much branched. This plant has not caused as much trouble in cultivated fields as was anticipated when it was first introduced in the west, but in meadows and pastures and along roadsides it has been a very troublesome weed. The writer has seen it growing in other alfalfa fields which were seeded with western seed; it seems to take kindly to Michigan conditions and might much better be eradicated at the start than otherwise.

Being an annual, if the plants are cut off at, or just below the ground before they seed, they will be finally disposed of. The most serious objection to this weed is its thrifty habit of growth; it is truly a plant out of place when found on a Michigan farm and should be promptly eradicated.

Building An Ice House.

Will you please tell us how to build an ice house so as to secure proper ventilation, insulation and drainage?
Livingston Co.

R. W.
One essential in the construction of an ice house is good drainage. If the soil is naturally well drained a layer of cinders a few inches thick spread on the surface of the ground will prove sufficient. In case, however, the soil is not naturally well drained a tile drain with suitable outlet should be laid around the outside of the foundation as it is essential to make adequate provision to get rid of the water from the melting ice. This essential provided, almost any kind of construction can be used, as in an ordinary ice house the insulation can be provided by means of a thick wall of saw-dust packed about the ice. This should be spread on the bottom over the cinders to a depth of a few inches and the ice packed in tightly, preferably on edge, care being taken to have the cakes as close together as possible. The wall of saw-dust should not be less than one foot thick about the outside, and preferably 16 or 18 inches, and about a foot should be spread over the top of the ice. A little ventilation in the gables of the ice house is perhaps beneficial.

The main factor in keeping the ice in a simple building of this kind, which can be constructed of wood or concrete or any other material desired, is that it be given proper attention at least twice a week during the entire summer season.

The ice will melt, somewhat, from the outside and it will be necessary to go about the edge of the ice house and pack the saw-dust down thoroughly about the ice once or twice a week as may be required to exclude the air. When this is done there will be little difficulty in keeping the ice satisfactorily in almost any kind of a building.

In case, however, it is desired to have

the ice is stored. When a lower temperature is desired, all that is necessary is to open a small ventilator and let in the warm outside air into the loft, which will cause a melting of the ice and a consequent lowering of the temperature in the refrigerating room. This is very convenient oftentimes, but inasmuch as considerable ice is needed in the average farm home, it is perhaps a more satis-

be done at a time during the year when it cannot be figured as a very considerable expense.

Potato Scab and Its Prevention.

I would like to ask through your valuable paper the best way to prepare potato ground. I have a piece of sandy loam soil which I manured with cow manure this spring and planted to potatoes. I soaked the seed in a solution of formaldehyde for two hours according to directions, but the potatoes were very scabby. Some tell me that cow manure will not make the tubers scabby, while others say that horse manure will not produce scab. Kindly give me your idea on this subject.

Sanilac Co.

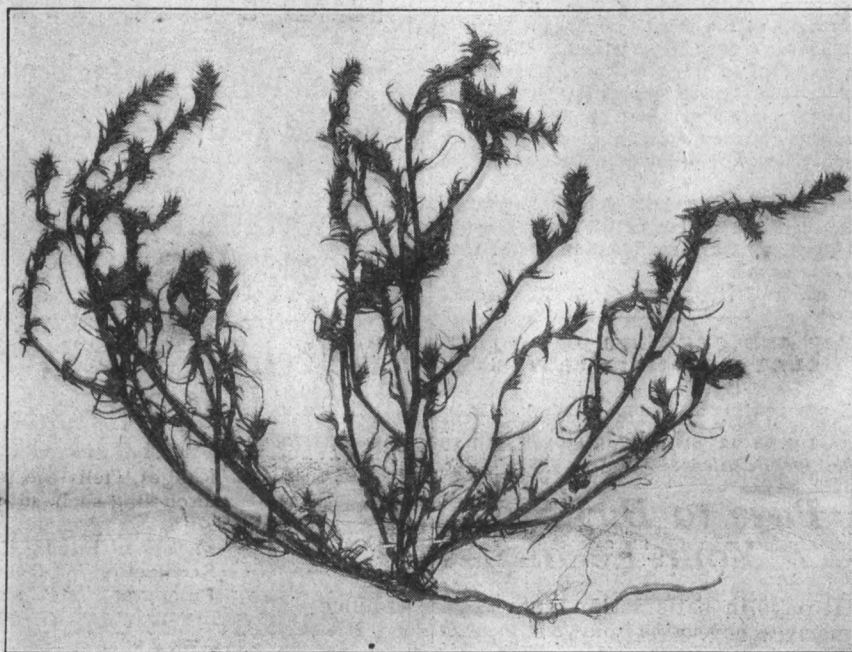
R. A. U.

While the treatment of seed potatoes for the prevention of scab is successful in preventing the propagation of the disease from the seed, it will not be effective on soils which are infested with the scab spores. These spores are claimed by good authorities to be able to live in the soil for at least six years without any known host. The same disease also attacks other root crops, such as beets, mangels, turnips, rutabagas, etc., so that in any case it is quite possible that sufficient of the scab spores may be present in the soil to make scab plentiful, even though the seed may have been treated.

Potato scab is a fungous disease which finds a more suitable home in soil that is alkaline, rather than acid in character. Hence the application of wood ashes or lime will have a tendency to increase scab in the crop. Manure, if applied heavily in the spring, is also an active agent in producing scab, especially in dry seasons when its decomposition is not rapid. The varieties of potatoes planted also make a difference in the result so far as scab is concerned, the thinner skinned varieties being more susceptible to the disease than the kinds with a more tough covering. Thus it will be seen that there are many reasons why the treatment of the seed may not be effective in controlling the disease in all cases, notwithstanding the fact that it is generally profitable and a successful method of controlling the disease under normal conditions.

If manure is to be applied to sod ground intended for potatoes, it should be applied

during the late fall or winter, rather than in the spring just before the ground is plowed. If so applied the tendency toward scab will not be greatly increased by its use, whatever the source of the manure. For some years the writer has practiced the use of commercial fertilizer for potatoes, as all of the available manure was needed for the corn ground. The use of liberal quantities of commercial fertilizer is said to discourage the development of scab probably because of the presence of a residue of acid in the fertilizer due to the treatment of the phosphate rock which it contains to make the phosphorus available, and our experience in its use would seem to substantiate the theory. However, the best results in yield are doubtless secured where an early application of stable manure as above advised is supplemented with a dressing of fertilizer when the ground is being fitted for the crop. Potatoes require an abundance of available plant food.

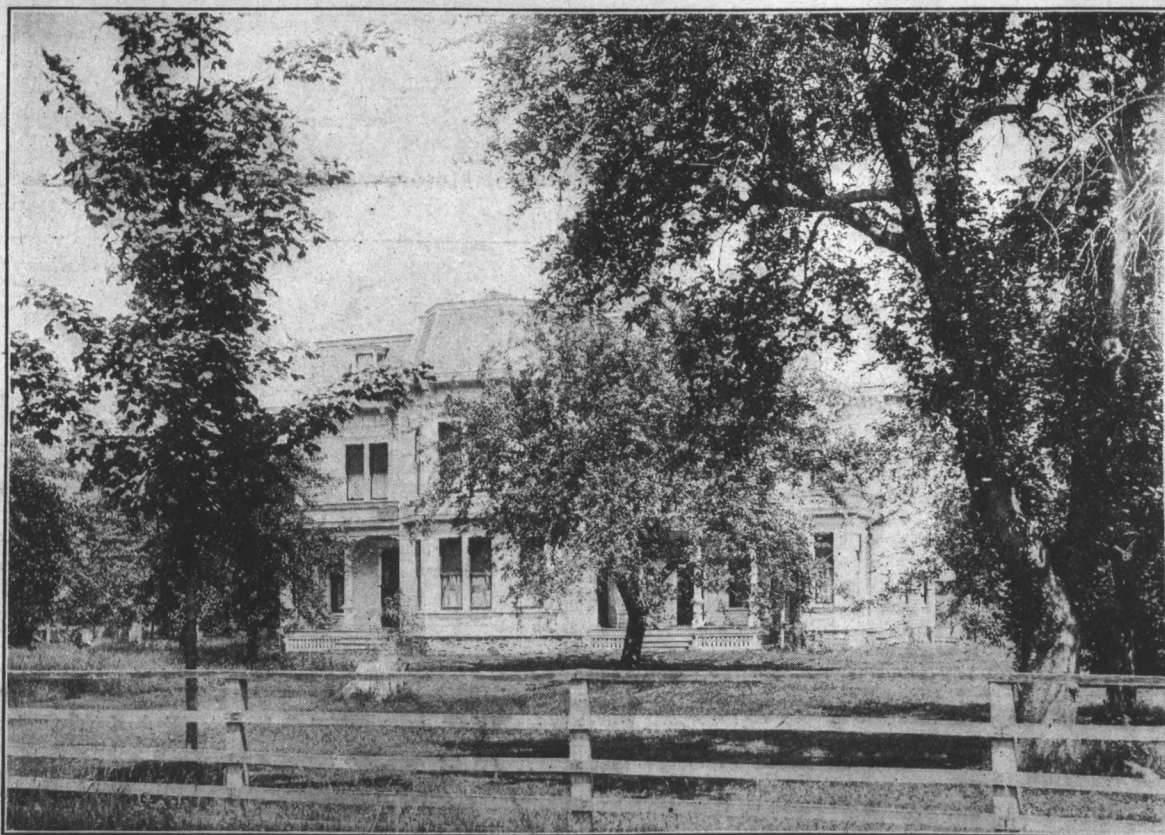


A Young Plant of the Russian Thistle.

a refrigerating room in an ice house, the latter, or at least a portion of it, should be so constructed that the ice may be tightly packed over this room and the wall will need to be very thoroughly insulated with at least two dead air spaces in the wall and preferably three, using building paper between the sheathing in each case. This construction should include the portion of building in which

factory plan to put up the ice in a more simple and less costly structure, to be used in a house refrigerator and for other purposes, as it may be needed.

Ice should not be considered a luxury by any farm family, but rather a necessity, and there is no home comfort that can be secured at less expense, since it may be conveniently harvested in almost any part of Michigan and the labor can



Farm Residence of Mr. E. H. Wilder, of Lenawee County, Mich. (See View of Guest Room on Page 254).

HARVESTING CLOVER SEED.

In your article in Aug. 26th issue of the Michigan Farmer I notice something about clover seed, which leads me to believe you are familiar with clover seed growing. This industry has not been developed in Leelanau county as yet, but I have an 18-acre field which I intend cutting and would like advice in regard to it. What is the usual yield where the stand is good? I am told by some of my neighbors that the field in question will yield from four to eight bushels per acre. Is that not putting it pretty strong, even for an A 1 stand? What is the best method of harvesting the crop?

Leelanau Co. J. L. K.

Clover seed is such an uncertain crop that one cannot give any very reliable information as to yield. It is so dependent upon local weather conditions that the fertilization and development of the seed is a very uncertain quantity. Some years when we have had a heavy crop of aftermath or second growth clover there was so much rain at the period of fertilization that it did not fill or fertilize, and I have seen splendid crops of second growth clover that did not have seed enough to pay for threshing. There was a great deal more money in it to cut it for hay. But again, when the season is right, then a thin growth of second crop will yield splendidly. If one wants to make a business of growing clover seed he must harvest the first crop early and it is better to clip it along the first part of June, even before it is large enough to make very much hay, and leave this on the ground. Then, when the second crop grows up it is almost invariably fairly well filled. If your heads are well filled four or five bushels per acre will not be out of the way. Sometimes it yields more than that, but on the average probably two bushels per acre is all that one could expect under varied conditions.

The best way I know to harvest clover seed is to use a clover seed attachment to a common mower. This is an arrangement made of thin steel bands bolted or riveted to the back and fastened to the mowing machine, the whole length of it. These bands are short on the outside and long enough on the side next to the mowing machine so that they can deliver the swath directly behind the machine. They are bent up in the form of a circle at the back end. These bands of steel will cause the swath to work back and be delivered in a small windrow back of the machine. This leaves it so that the next time you drive around your horses and machine straddle this windrow and do not trample upon the seed. Some of these clover seed attachments have arrangements so that you can drop the seed in bunches rather than in the windrow. When I first purchased mine it had this dropper arrangement but in some way it got out of working order since and we have discontinued its use entirely. I really don't think this feature amounts to much. After you cut the clover seed in this way, then rake it with a common hay rake going lengthwise of the windrows. Then your horses do not trample upon the seed at all. It can be raked up very soon after cutting, before it gets too dry and cured under hay caps. Then afterwards it can be hulled and put in the barn or stack, or if you have it in good sized cocks you can leave it until it is well cured and hull it directly from the field.

COLON C. LILLIE.

A BEAN FIELD EXPERIMENT.

If by an improved method of treatment and culture not involving any extra expense, one can thereby increase the yield and quality, or both, of some particular crop then that fact should be generally known among the farming class. While the following may not be new I am confident that it is not generally observed and also that it has or will add an extra profit above that usually realized by me in ordinary seasons from my bean crop and believe others may profit by a similar culture of the bean.

This section is largely given up to sugar beet culture and necessarily up-to-date beet implements for drilling, cultivating, etc., are in evidence on every farm growing them. Among these tools there is a very successful drill for sowing beet seed. This drill has four hoes and is adjustable for 18 in. to 28 in. rows, and while not in any wise recommended by its makers as a bean drill, still, on looking one over that a neighbor owned, I came to the conclusion that it would handle beans, and therefore readily got it for a trial.

The field to be sown was 15 acres and

fitted in very good shape, and immediately after a shower this lot was drilled by the above machine in 24 instead of the usual 28-in. rows. A row, therefore, in every bout was gained over the 28-in. way of drilling. The seed after a few rods of drilling and measuring was distributed at the rate of $1\frac{1}{2}$ bu. per acre. This is a very heavy seeding for beans, but bear in mind, there are many extra rows in this field, and as a consequence additional seed is required. This drill is equipped with runners or shoes—followed by light individual wheel rollers for compacting the soil on either side of each row over the seed and drills to a depth of from one to two inches only.

These beans came splendidly, were uniform and no breaks were in any rows, they received two cultivations and commenced to pod when cultivation ceased. Although we have had the driest season in many years, they hang with well-filled or with nearly all pods filled at this date, (August 21). It is evident that being spaced in narrow rows the bean vines would soon cover and shade the soil (my direct object) which they did. Shaded ground or soil covered with mulch or vines holds moisture to a remarkable degree, and although the growing vines consume vast amounts of moisture I am convinced that the shade they afford the contiguous soil beneath them more than compensates for the extra moisture consumed by the additional crowding of the rows.

The rows are just right for the ordinary puller to work in, as the rows will strike the knives about midway, thus insuring uniform, clean pulling. Thorough cultivation can be given either by the two-row, one-horse cultivator, fitted with weed knives, or the ordinary two-horse cultivator, shut close. A trial is worthy the attention of all bean growers at least, as I am confident the yield may be increased.

Clinton Co. G. A. RANDALL.

BEST AND CHEAPEST WAY TO SECURE A CATCH OF CLOVER.

I am renting 20 acres which has been cropped very heavy in former years. I sowed it to wheat last fall and seeded to clover, but what clover did not winter-kill died out during the hot spell in May and the fly and dry weather reduced a good stand of wheat to a harvest of seven bushels per acre. The soil is a gravelly loam and is affected by dry weather quite easily. Will you kindly advise me the best and cheapest way to secure a catch of clover?

Berrien Co.

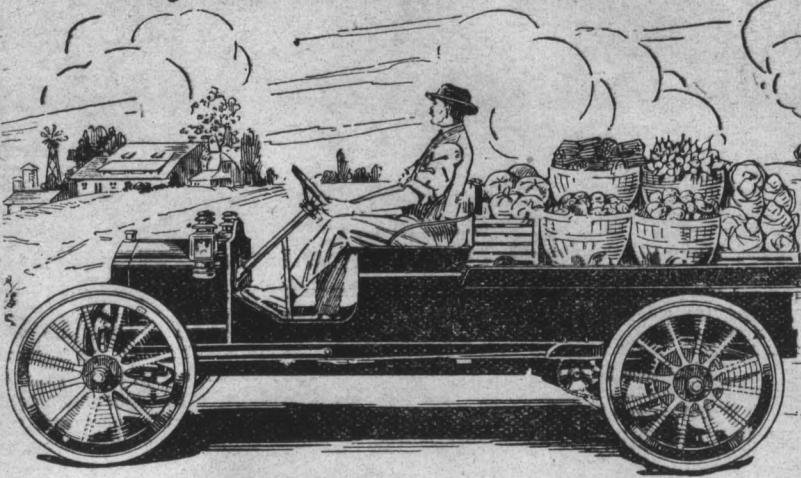
E. H.

If there is a large amount of sorrel growing on this field it is almost a sure indication that the soil is acid, and consequently, the only way to get clover to grow is to sweeten the soil by the use of lime. You cannot raise a good crop of wheat, commercial fertilizers won't give you good results, in fact, you can do but little toward improving this soil by getting a good crop of clover started until you sweeten it by the use of lime. Most any form of lime will do, and taking the cost into consideration it doesn't make very much difference which form you use. Ground limestone will not cost as much as pulverized burned lime and it is not quite so valuable, but either one will correct the acidity and sweeten the soil. If I used pulverized burned lime I would use one ton per acre and if I used the ground limestone I would use two tons per acre. Now the cheapest and best way to get this field seeded to clover, I believe, would be to sow it to wheat this fall again, use lime to sweeten the soil, and then use a good liberal application of commercial fertilizer to furnish the plant food for the wheat and for the clover which follows.

I do not think you can use a better brand of fertilizer on this soil, under these conditions, than one that will analyze about two per cent of ammonia, nine per cent of phosphoric acid, and five per cent of potash. That would be a splendid formula for this kind of soil, under the condition that it is in and I would recommend that you use 500 lbs. per acre. This fertilizer will cost in the neighborhood of \$26 or \$27 per ton. A good heavy application of lime and a good heavy application of fertilizer on the wheat crop will practically assure you a good crop of wheat and a good stand of clover. I believe that the wheat will pay all expenses of getting the land seeded to clover and a profit besides, even by using two tons of limestone and 500 lbs. of fertilizer to the acre. Then, after the land is seeded to clover the soil will be in condition, both with regard to acidity and plant food so that you will get a profitable, vigorous stand of clover.

COLON C. LILLIE.

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SOWING RYE ON MUCK LAND.

I would like some information on raising rye on muck ground. I have four acres of muck and wish to seed it to something that will make a permanent pasture and cut it for hay. This land floods over during spring rains and water stands on it for two or three days at a time, for there is no outlet. Would it be advisable to sow grass seed in the fall after the rye comes off, or seed at time of sowing rye? Would timothy, alsike and red-top make a good mixture for hay and permanent pasture and how much of each should be sowed per acre? Eaton Co. SUBSCRIBER.

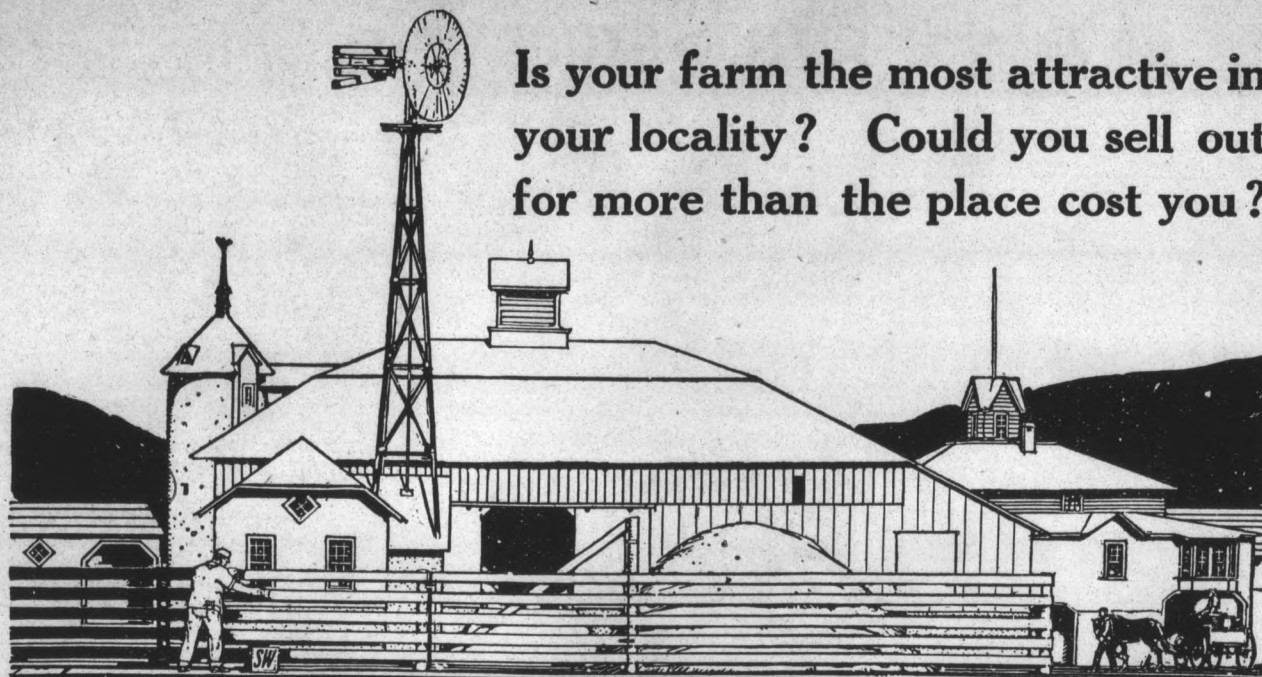
If this muck land is liable to be covered with water for several days at a time in the spring I doubt if you can make very much of a success of growing rye or anything else for that matter. Tame grasses even will not stand too much water. On low lying land adjacent to streams which overflow, if the high water does not continue too long, some of our more hardy tame grasses will live. But if the water stays too long it will kill any and all of them. When land is submerged to the water all the air is excluded and the plant, if it did not die from any other cause would be absolutely smothered. Covering the land with water and leaving it for any considerable length of time will kill the grass just as effectively as stacking a stack of straw on top of the grass, it would smother it. We call it drowning, and I am of the opinion that if this land was liable to be covered with water for several days at a time next spring there would be little use of seeding it to rye. If you get a good stand of rye this fall and a good growth it would be smothered or drowned out next spring and this being the case I think it would be better to wait until the wet weather is over and the muck becomes dry enough to work and then seed it to timothy, alsike, and red top as suggested. I don't think you can get any better grasses for this kind of land and they will live if any of them will. June grass is our most hardy grass and it will stand more water, that is, it will stand being submerged as long or longer than any grass. I would mix the alsike, timothy, and red top equal parts by measure and sow not less than 10 quarts per acre.

I would suggest that if this land is not covered too late in the spring with water that it might be more profitable to raise such crops as corn, which would grow after the time of the year that the land was submerged and ripen so that the crop could be removed that same year. However, if the land is not covered with water long enough so that it will kill the grasses it will make a good pasture. COLON C. LILLIE.

GROWING ALFALFA SEED.

I have several acres of alfalfa which was cut last season and twice this season. It is now partially in blossom, almost ready to cut the third time. Some of the heads are filling very full of seed. Will it damage the future value of my field should I allow the seed to mature? Gratiot Co. SUBSCRIBER.

In the west the second crop of alfalfa is the one usually utilized for seed production. This is perhaps largely due to the fact that comparatively dry weather is required for the best development of the seed. Under favorable weather conditions the new growth at the crown of the plant will start out at about the time the plant is in bloom. In dry weather this growth will not start as quickly, for which reason the plants seem to be able to produce more good seed and the danger of injuring the stand by seed production is also lessened, since the new growth should not be cut back so as to prevent a late growth which will afford good cover for the stand during the winter. The prevailing dry weather has doubtless been responsible for the tendency toward heavy seeding noted in the alfalfa field mentioned in this inquiry. If the crowns have not sent out a new growth which would be cut back in harvesting the seed, injury to the stand might not result from letting the seed mature, although as a general rule the best authorities do not advise cutting the last crop from the field much, if any, later than the first of September. On the other hand, in case the new growth is developed so it will be cut off in harvesting the seed crop, so that the plants will be required to form new buds to make any late growth, there might be danger of injuring the stand, especially if the winter were severe or unfavorable weather conditions should prevail this fall. While there has been considerable alfalfa seed produced in Michigan in recent years, there is not enough experimental data available at the present time to establish beyond the question of doubt the limitations of safety in the production of a late crop of seed with reference to the permanency of the stand.



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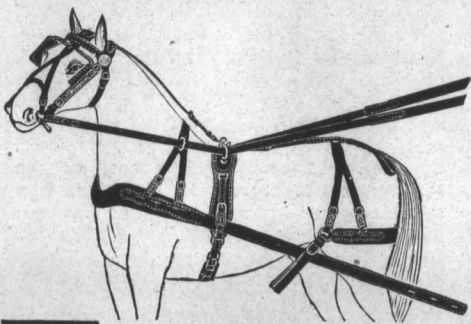
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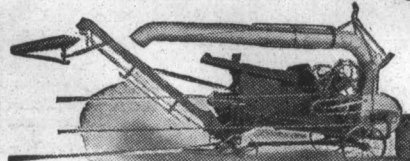
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The territory traversed by the Nashville, Chattanooga & St. Louis Railway is rich in natural resources, and its climatic conditions and the fertility of its soil offer unexcelled opportunities for the profitable production of grains, grasses, live stock and truck crops. Fertile and attractive farm lands may be had at very low prices. Write me at once for free descriptive literature. **H. F. Smith, Traffic Manager, Dept. F, Nashville, Tenn.**

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This is a fine corn and clover farm of 100 acres with mill and water power included; buildings are all first-class and well located; 2 story 12-room house with fine cellar, also tenant house; barn 35 x 65 and other outbuildings; feed and cider mill bring in good revenue; only 1 1/2 miles from R. R. Station; fine chance for electric plant; 200 bearing apple trees, also pear, plum, cherry and small fruits; 80 acres in smooth fields of rich black loam; good pasture fenced with wire; owner is old, hence low price of \$8500, large part can remain on mortgage. For further information, pictures and traveling instructions to see this and other Southern Michigan farms write for Supplement "C", Strout's Farm Catalogue, just out, copy free. Station 101, E. A. STROUT, Old Colony Bldg., Chicago.

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THAT GREAT FRUIT AND TRUCK
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LIVE STOCK

FALL WORK WITH THE HOGS.

The fall season presents new and difficult problems in hog management. The shotes are to be kept growing as rapidly and economically as possible. Next year's brood sows are to be selected, either from the farm lot or to be purchased from other breeders. On many farms new boars are to be purchased and put into service. This latter deserves special attention as the next crop of pigs depends to a large extent upon the character of the boar used.

Fall Feeding the Shotes.

Feeding the spring shotes is probably the most important problem just now. There are a great many farmers in a frame of mind similar to that of a Minnesota farmer who wrote a few days ago concerning his young porkers. He has 200 grade Poland-China spring pigs. His questions were about as follows: "What is the best and cheapest feed for those pigs? Is tankage a safe feed for pigs? Is it economical?" Our reply to him stated that tankage is perfectly safe as a hog feed and that ordinarily it is economical. We were unable to make any positive suggestions in regard to feeding the pigs as our enquirer had neglected to say anything in regard to pasture or green feed furnished. However, we stated that if the youngsters were on a good legume pasture, clover or alfalfa, that corn alone would probably be most economical for some time, that 10 per cent of tankage might be added gradually as the pasture dries up later. Pigs will not gain quite so rapidly but the gains will be made a little cheaper when corn alone is fed with alfalfa or clover. Then we stated that if the pigs are on blue grass, timothy or some other non-leguminous crop it will pay to make the ration 10 per cent of tankage at once. The same for dry lot in case it is necessary to keep the hogs confined.

There are many who have had no experience in feeding tankage and who are desirous of using it. For such a short explanation is given. As is quite generally known, tankage and meat meal are by-products of the meat packing plants and composed largely of meat scraps. The material is thoroughly cooked which destroys all possible disease germs. It is then dried and put into 100-pound sacks or into wooden kegs for shipment. To feed, it is only necessary to weigh or measure out the required amount and to put sufficient water on it to soak it up nicely. It is best to put the tankage into the trough and let the hogs clean it up before the corn is given, because they like corn somewhat better and will leave the tankage for it. Tankage does not produce the slightest ill effects. It will not be economical to feed it in amounts above 10 per cent.

Hogging Down Corn.

Turning hogs into standing corn and allowing them to hog it down is a practice that deserves to become more general. It is very economical so far as labor is concerned, as it saves the work of husking the corn and feeding it in dry lot or pasture. The standing stalks furnish green feed. Those men who have planted pumpkins or have sown rape or cowpeas or soy beans in their corn fields will secure an additional amount of pork from that extra crop. In the hogging down trials at the Minnesota station the hogs made both more rapid gains and on less grain per 100 pounds of gain as well as saving labor, as mentioned above.

Pigs raised on pasture being more active will be best for hogging down work after they have reached a weight of 100 pounds or more. Such pigs will be more active and strong enough to break down the stalks. Corn that has reached a stage sufficient to be snapped and fed in the yard is ready to be hogged down. The green corn is not injurious to hogs, but the change to it should be gradual to avoid a sudden change of feed. This may be very easily done by cutting the standing stalks and feeding them for a few days on pasture or in the dry lot. If the field can be divided into small areas and the hogs kept in one until it is cleaned up before being turned into another it will be most satisfactory. It is estimated that 20 pigs averaging 125 pounds will clean up one acre of 40-bushel corn in 15 days. From that any man can easily figure the amount of standing corn he will need for his own herd. Usually the season for this will last from 30 to 50 days.

Buying a Boar.

To buy the boar early has several advantages. It enables a man to go to the breeder's farm and get the pick of the herd, usually at a very nominal price. It enables the purchaser to get the new boar home and accustom him to his new surroundings and the different care. On the breeder's farm, too, the purchaser may see the sire and dam and the litter brothers and sisters and draw some important conclusions from those and the surrounding conditions. Whenever possible it is best to buy a boar that has been used at least one year and which has proved himself to be a satisfactory sire. Every progressive breeder is seeking to improve the average quality of his herd. This is to be largely accomplished through the use of better sires. Too much attention, for that reason, cannot be given to the selection of the male to head the sow herd.

Selecting the Sows.

A little time and thought spent amongst the sows, both young and old, will enable a man to select females that will average better in quality than his present herd. Certain of the old sows will best be sold off because they have farrowed small litters or have been poor mothers or for some reason have been unsatisfactory. The young sows to replace the old ones need be selected with considerable care. The biggest and fattest pigs may be the only ones in the litter. The dams of the sow pigs to be reserved for breeding purposes need be studied as much as do the young sows themselves. In purchasing sows from other breeders it is sufficient to observe the same general principles, as stated above in regard to buying a boar.

Iowa.

H. E. MCCARTNEY.

QUALITY IN HORSE GOODS.

During the last ten years, there has developed very fast, the idea of marking goods with a trademark. The farmer has learned that it is safest to buy advertised goods that bear the trademark of a well-known manufacturer, because the manufacturer protects his trademark by making his goods as well as possible, and in nearly every case makes the purchaser absolutely safe by means of his guarantee.

Agricultural implements, gas engines, wagons, buggies, automobiles, clothing, boots and shoes, in short, nearly everything the farmer needs in his everyday life is now advertised under the guarantee and trademark of the maker, and it is by far safest to buy this class of goods. Until lately, however, no manufacturer of horse goods and harness had advertised in the farm papers to the farm, and backed his goods with his trademark and guarantee. This field has, however, been entered recently by some of the leading manufacturers in this line, who advertise well-known brands of harness, and other horse goods in the Michigan Farmer. They do not sell by mail, but place their goods with the principal dealer in every community. The trademark is a guaranty of quality which should not be overlooked and which is generally backed by a more binding guaranty by the manufacturers, regarding which the advertiser or his local dealer will furnish information on request.

LIVE STOCK NOTES.

Feed, water and care are always given live stock while on the way to market but it is always desirable to have an attendant go along to see that everything goes right with the stock. It is customary for a railroad to allow an attendant with each car of stock. He can watch the stock and see that they are properly cared for, and that the car is properly placed at the end of the journey. A competent attendant may often save a lot of unnecessary switching and knocking about the railroad yards, and by properly looking after the animals prevent any serious injury.

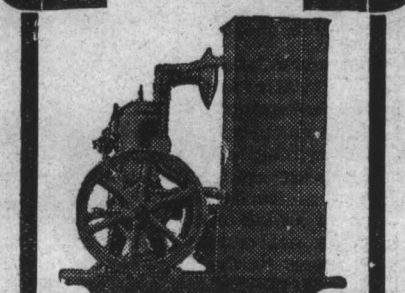
Loud complaints are made by stockmen who market live stock in Chicago regarding the slow time that some of the railroads are making, many stock trains arriving too late for the day's market. A road that has in the past made the time from East St. Louis to Chicago in 13 hours now takes 17 hours for the run. The railroads reply that under the existing conditions they are unable to do better. The vice-president of one of the railroads says: "We cannot raise freight rates. Every time we attempt it we are beaten, but we must have more revenue, and the next best way to get it is to make slower time in hauling freight and lengthen our trains."

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Gasoline is risky stuff to handle—hard to get sometimes—and becoming more expensive all of the time.

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This powerful germicide is a positive lice killer; it keeps the hog's skin clean and cures all parasitic skin disorders.

Dr. Hess Dip and Disinfectant

should also be used for disinfecting the hog pen—to drive out the filth and keep the place sweet smelling.

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(WITH BAGGER ATTACHMENT)
do the work of two ordinary mills with less power. Grinds mixed feed, corn on cob or in shucks, sheaf oats, Kaffir corn, alfalfa, clover hay, grains and cotton seed. Will grind coarse or fine. Easily operated. Force feed never chokes. For gasoline or steam engine. Fully guaranteed. Catalog FREE. Write today.

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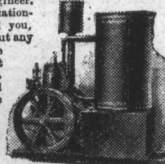
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Get It From the Factory Direct. Sold direct to you at factory prices on 30 days trial. Save the dealers profit. Farm, Hog and Poultry Fence at from 11 1/2 CENTS A ROD UP. All wires are heavily galvanized 30 rod spool of ideal galvanized Barbed Wire \$1.55. Write today for large free Catalogue showing 75 different styles and heights of fencing. Box 276 KITSELMAN BROS. MUNCIE, IND.

MARKETING THE FIELD PRODUCTS THROUGH LIVE STOCK.

Accumulating experience of the day and the history of agriculture from its earliest stages show that the farmer who grows suitable feed crops and markets them through good live stock can maintain and increase the productivity of his soil. Aside from converting the raw products of the field into meat, milk, wool and power, farm live stock yields in addition a by-product (manure) which has an actual demonstrated cash value of \$2.50 per ton. Following a systematic alternation of crops and feeding them to live stock is the only way of eating the cake and having it. One of the phases of live stock feeding that has discouraged many farmers is the problem of marketing animals when they command the best price.

It is much easier, generally speaking, to hit the highest market price with grain crops than it is with live stock. There are business interests that aim at certain seasons of the year to depreciate the prices of farm products. The grain farmer is less at their mercy than the stock farmer, because he can, as a rule, hold his grain for a few months until the market suits him. The stock farmer can not do this with his cattle, sheep and hogs to anything like the same extent. Cattle, sheep and hogs must go when they are ready for market. It is the best thing a farmer can do to sell when they are ready, that is, when they have reached a weight at which he can not add more weight at a profit. The only advice that it is safe to offer on this point is to avoid being a market chaser, and to sell live stock when it is properly conditioned. There is a large expense connected with holding fat stock and in many instances the market goes the wrong way. Every farmer knows that with corn at, say 50 cents, he is assuming the role of a speculator by holding a bunch of stock for a higher market, after the most of the grain is taken for the food of support and the food of increase becomes a diminishing quantity, diminished to such an extent that he can not make a profitable gain on his stock.

Grading Stock for Market.

In shipping live stock to market one should take care to assort and grade the animals as to size, form and condition. It is always the evenly developed animals that possess high quality that bring the top market prices. Stock that is marketed in a mixed and uncouth condition must be assorted and graded as to quality before it will bring its real value. No man need spend much time in any one of the large markets to discover that uniformity and quality are two potent factors in securing the top market prices for live stock. The grades into which live stock is sorted vary somewhat in different markets but the standard grades are about the same in all markets. In no market is it possible to pass a poorly conditioned animal for finished. The man who ships to market or sells to a buyer a bunch of mixed stock is sure to suffer the losses that result from sorting. It is apparent that in the future all live stock will be sold on a basis of quality. Years ago drovers purchased almost any kind of live stock, but today conditions have changed, and only well-conditioned stock can be sold for good prices.

Every large live stock market has a fixed standard of prices which are subject to the supply and demand. If prices go up, it is always the highest quality of stock that commands the top price, while on the other hand if the prices decline, it is the poorer grade of stock that suffers the greatest slump. There is always a lively demand for stock that possesses high killing quality, and no matter how large the run of the general classes the demand for quality can not be satisfied in any market. If the supply of the highest quality is limited, lower grades are frequently rushed in for a few days, but the standard of prices remains unchanged.

It is astonishing to observe during a visit to the stock yards how little care most farmers take in conditioning their animals for market. The most common mistake is made in selling animals that are half finished. Fully 75 per cent of all the animals sold reach market in an unfinished condition. This, more than anything else, is probably accountable for the common belief that there is no money in feeding live stock. Sometimes stock is sold because grain is high. At other times the available supply of feed has been consumed before the stock is conditioned, but more frequently perhaps, many feeders do not understand what well-conditioned means. With some feed-

ers it is a case of going with the crowd. No amount of reasoning can overcome the influence of that old proverb that a bird in the hand is worth two in the bush. It is true unless a man is a good shot. If he has judgment and nerve he can just as well bag two birds at one shot as to miss the one. If he has plenty of feed and suitable conveniences for his stock he can finish it out and not sacrifice them in a poorly finished condition to save a few bushels of grain. Whether farmers are feeding cattle, sheep, hogs or horses for market it is always the last few bushels of feed required to get them up to the proper weight that brings the best returns.

Selling to the Local Buyer.

The simplest method of selling live stock in small bunches is to sell to the buyers who visit your farm and make their selections. Men who buy in this way do not pay quite as high prices as you would be likely to get by shipping the same stock direct in carload lots to a large market, but it is many times advantageous to sell less than a carload in this way. In dealing with these country buyers a man has an opportunity to exercise his talent as a salesman for they are very shrewd business men and are out to drive the best bargain they know how with men who do not understand market conditions and classes. In every live stock feeding sections there are some feeders who sell their stock to the same buyers regularly, a plan which has many advantages to both buyer and feeder. If a buyer feels certain of obtaining well finished stock which he can use to advantage, he is willing to make liberal concessions, and the feeder finds it greatly to his advantage to sell to a man with whom he is acquainted, in whom he has confidence and to whom he can sell whenever his stock is in condition to market. I have always made it a point to keep in close touch with the leading buyer in my section and have always been able to get as good prices for my stock as the farmers who have done their own shipping at a far greater expense.

Important Details in Shipping Stock.

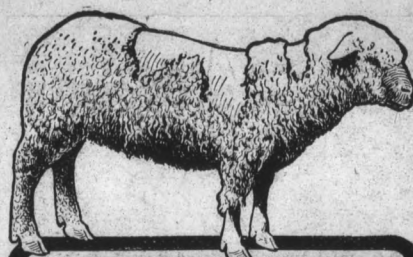
When one is shipping live stock in car load lots it is necessary to order cars from the railroad agent a few days before he desires to load his stock. At certain times stock cars are very scarce and two or three days are required to obtain them from some other point along the road. Stock cars are of various types. If valuable horses are to be shipped a long distance a palace horse car with adjustable stalls should be used. In loading a horse is placed in one end of a car, his head facing the side, and a wooden partition is swung around next to him and fastened to make one side of the stall. A second horse is led up alongside of the first, facing the same way, and the other partition is swung around to form the side of the stall. Thus the car is filled with horses in independent stalls, each stall being furnished with a manger for hay and water. An alleyway extends along in front of the horses, and there are pipes for use in watering where there are conveniences along the road. Such a car is chartered and costs so much a mile besides the regular freight rates, this going to the company that owns the car. Various kinds of cars may be used for shipping cattle, sheep and hogs. The kind of cars to select depends in a measure upon the number of animals to be loaded and the distance to the market. During cold weather hogs may be loaded closer than in the summer. As a rule it is best not to overcrowd at any time of the year.

Feeding animals just before loading and on the road is a matter of great importance in having them reach market in good shape. For cattle, sheep and horses plenty of hay and only a limited quantity of water should be supplied. Hogs shipped loose in the car may be given ear corn. If the weather is extremely warm the cars should be bedded with sand which has been sprinkled with cool water just before they are loaded.

The great secret of success in shipping all classes of live stock and getting them onto the market in good condition is to place them on the cars full of feed, with as little moisture as possible. Stock that is properly handled should arrive at the market with their bowels in good condition and ready for a fill of water. Many feeders make it a point to feed their animals salt just before loading to get them to drink large quantities of water, but this is a penny wise and pound foolish policy. Too much water causes a heavy shrinkage in live stock that are on the road to market.

New York.

W. MILTON KELLY.



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A DIP THAT DOES THE WORK WITHOUT INJURY

TO THE ANIMAL OR FLEECE.
NO BURNING OF THE FIBRES;
NO STAINING; NO POISONING;
NO SICKENING.

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INEXPENSIVE, EASY TO USE

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WE HAVE BOOKLETS GIVING FULL DIRECTIONS FOR USE ALSO MANY VALUABLE HINTS ON HANDLING SHEEP. WRITE FOR FREE COPIES.

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Caustic Balsam

The Great French Veterinary Remedy.
A SAFE, SPEEDY AND
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SUPERSEDES ALL CAUTERY OR FIRING
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FREE this real leather bill fold for the head of the Farm

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Thousands of farmers will buy gasoline engines this fall and winter. I want to get in direct and personal touch with every one of them, as I want them to know about the Olds Engine.

If you are going to buy an engine, or are thinking about it, you ought to know what an Olds Engine will do for you. I want to tell you about them—give you just the information you want—so if you will fill out the coupon below (or write me a letter) saying what size engine you want, whether portable or stationary, and when you expect to need one, without asking you to make any promise or obligating you in any way, I will send you absolutely free this genuine calfskin bill fold, stamped with your name in gold letters.

It will hold fifteen bills easily. When folded it will go in a small pocket. It is very convenient, handsome and useful; will last a lifetime. Has no advertisement on it.

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are known the world over and used by farmers everywhere. They are the most satisfactory engine made for farm work. I guarantee them to do all we say they will—you to be the judge. Ask any man who has an Olds Engine. He will tell you.

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If you are going to buy an engine, put a check mark (X) in the place showing the size and style engine you want, and when you expect to need it, and mail to me personally at once. Address me as below.

BRANCHES

1007 Farnam St.
Omaha, Neb.
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J. B. SEAGER, Gen. Mgr.

Seager Engine Works

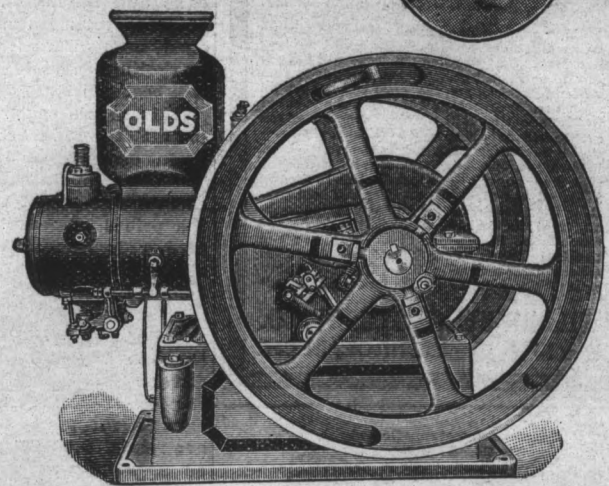
915 Walnut St., Lansing, Mich.

To make quick deliveries, I also have a complete stock of engines and parts in warehouses at Houston, Tex. Atlanta, Ga. Decatur, Ill. Lexington, Miss. Cairo, Ill. Minneapolis, Minn. Binghamton, N. Y. Philadelphia, Pa.

NOTICE—If you prefer, write to my nearest branch, and if I am not there, my personal representative will attend to it.

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SEAGER ENGINE WORKS, Lansing, Mich.

Send me full particulars about the following engine. It is understood that I do not obligate myself in any way by asking for this information.

Style wanted: Portable Stationary
Horse Power wanted: 1 1/2 3 4 1/2 6 8 12 15 20
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Sign name plainly, just the way you want it on bill fold.

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Our summer importation, in our estimation the best lot of horses we have ever had at Oaklawn, has arrived. Numerous important prize-winners are included, then the high average is the main thing, as every animal would be a credit in any herd. Write us, DUNHAMS, Wayne, Illinois.

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For hard-milking cows or leaky teats. Prevents leakage where teat opening is relaxed and cures hard milking where due to an obstruction in the canal. Our price 35c each, or \$1.00 for a set of four. Send orders to

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BREEDERS' DIRECTORY.

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ABERDEEN-ANGUS.

Herd, consisting of Trojan Ericas, 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. He is assisted by Undulata Blackbird Ito.

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Registered bulls from four to ten months old for sale that are closely related to Hengerveld De Kol, De Kols 2nd Butter Boy 3rd, and Colantha 4th's Johanna. The dams are heavy milkers and mostly in the A. R. O. Prices reasonable. Send for list. Bigelow's Holstein Farm, Breedsville, Mich.

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Top Notch registered young Holstein Bulls combining in themselves the blood of cows which now hold and have in the past held World's Records for milk and butter fat at fair prices.

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Holstein Friesian Cattle—BULL CALVES, Grandsons of Canary Mercedes. W. B. JONES, Oak Grove, Michigan.

DEKOL-KORNDYKE Holstein bull calf, choicest A. R. O. breeding. Splendid individual, \$50. Ypsilanti Farms, Ypsilanti, Mich., Cole Brothers, Proprietors.

HOLSTEIN BULLS—1 to 11 months old, \$25 to \$30 Good breeding. HOBART W. FAY, Eden, Mich.

FOR SALE—3 yearling Holstein-Friesian bulls, also bred heifers \$150 to \$200 each. Bull calves \$40 to \$60. 33 years a breeder. Photos and pedigrees on application. W. C. JACKSON, South Bend, Ind., 719 Rex St.

HOLSTEINS—I have for sale a few cows and yearling heifers bred to Johanna, Concordia Champion, the only bull of any breed whose 2 grand dams average 34.06 lbs. butter in 7 days. Also bull calves and service bulls. L. E. CONNELL, Payette, O.

HEREFORDS—Both sexes and all ages for sale. Also Poland-China hogs. ALLEN BROS., Paw Paw, Mich.

FOR SALE—Reg. St. Lambert Jerseys. Cows and Bulls from high producing stock. C. A. BRISTOL, Fenton, Michigan.

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Bull calves sired by these great bulls, and out of splendid dairy cows, many of them in test for register of merit. Also a few heifers and heifer calves for sale. Write for description and prices. Satisfaction guaranteed, or money refunded.

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SHEEP.

SHADY LANE HAMPSHIRE—Magnificent lot one and 2-year old rams. Come and take your pick for \$15.00. None better. Comfort, Tyler, Coldwater, Mich.

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FOR SALE—Registered Rambouillet Sheep. Both sexes, all ages. Prize winners. IRA B. BALDWIN, Hastings, Michigan.

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VON HOMEYER RAMBOUILLET RAMS at farmers' prices for the next 90 days. Large, plain, heavy fleeced. C. E. LOCKWOOD, Washington, Mich.

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For Sale—Good Reg. Shropshire Rams and Ram Lambs. Also Duroc-Jersey swine, any age or sex. M. A. BRAY, Okemos, (Ingham Co.) Mich.

SHROPSHIRE HALL STOCK FARM has a few extra good yearlings and 2-year-old rams at a reasonable price. L. S. DUNHAM & SONS, Concord, Mich.

Flockheaders—Choice yearling Shropshire rams for sale; also yearling and aged ewes. JONES & MORRIS, Flushing, Michigan.

SHROPSHIRE yearlings and ram lambs of best wool and mutton type. Prices right. Write your wants. Also O. I. C. Swine. Geo. P. Andrews, Dansville, Mich.

Shropshire Rams and Ewes—all ages; choice stock; at farmers' prices. LONG BEACH FARM, Augusta, Kalamazoo Co., Mich.

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DAMS BROS., Litchfield, Mich., breeders of Imp. Chester White and Tamworth swine, service boars, sows bred or open, of either breed. Shorthorn Cattle, Buff Rock, Buff Wyandotte, W. Orpington. Okls. all breeding stock, leading winners.

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O. I. C's For Sale—Best quality, large growthy type, either sex, pairs not akin, some fine bred glits, choice lot of fall pigs all ages. OTTO B. SCHULZE, Nashville, Michigan.

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O. I. C. SWINE—My herd is chiefly strain both males and females. Get my price before you buy. Will register free of charge in purchaser's name. A. J. GORDEN, R. No. 2, Dorr, Michigan.

O. I. C's—I am offering 12 choice young boars and 10 select now pigs at farmers' prices in order to make room for fall pigs. Fred Nickel, Monroe, Mich., R-1.

DUROC-JERSEY SOWS bred for Sept. farrow. Also spring glits and boars of choicest breeding at right prices. E. R. CORNELL, Howell, Mich.

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DUROC-JERSEYS—25 fine spring glits, popular blood lines. Good individuals; 10 fine boars, 5 bred sows due to farrow soon. JOHN MCNICOL, R. No. 1, North Star, Mich.

WALNUT HILL DUROCS—17 fancy sows bred to Mich. Col. for August and Sept. farrow. 165 spring pigs, both sexes, priced right. Write or come. J. C. BARNEY, COLDWATER, MICHIGAN.

BUTLER'S BIG TYPE POLAND-CHINAS—size, bone, quality, 10 big fall boars at \$25; 100 spring pigs \$10 to \$15; 50 fall pigs \$20; 5 registered Shropshires at \$10 to \$15; 6 reg. Jersey bulls at \$15 to \$25; 50 reg. Shrop. ewes at \$10. We are the farmer's friend. J. C. Butler, Portland, Mich.

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Three Extra Good Fall P. C. Boars

By Next In Line. 32 spring male pigs ready to ship. I ship O. O. D. and furnish pedigree promptly. If you want good as the best, write me for prices.

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READY FOR SERVICE. WATERMAN & WATERMAN, Successors to the Murray-Waterman Co., ANN ARBOR, MICH.

Lillie Farmstead Yorkshires—Holywell Manor and Oak Lodge blood predominates. Large Herd. Three service boars. Pairs and trios, not akin. Boars ready for service. A fine lot of spring pigs. Glits bred for August farrow. The best hog on earth. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Mich.

POULTRY AND BEES

FEEDING MARKET POULTRY AND LAYING HENS.

In raising poultry, two kinds of feeding are necessary in the autumn and winter months, one for the market and one for the laying hen. It goes without argument that the market stock and the layers should be kept and fed separately. In feeding for market the aim should be to get the fowls as fat and heavy as possible in the shortest possible time, while the purpose in feeding layers is to keep them in the best laying condition, which means that they must not be allowed to become too fat.

The winter months are now rapidly approaching and the poultryman should go over his stock of hens carefully, only keeping those which promise good laying quality and laying condition. Those that do not look promising should be made as heavy as possible and put on the market.

In feeding layers the object should not be to keep them fully supplied but rather in a condition eager for a little food at all times. Too frequent feeding often causes indigestion and stops the hen from laying. It is easy enough to fatten a hen by penning her and cramming her with fat-forming foods, but the other is more difficult.

To the laying hen opportunity to work is of more importance than feeding, and it is not necessary to feed her more than twice a day. A noon meal usually satisfies the fowl to such an extent that it will not be inclined to scratch and exercise during the afternoon. The hen that has to hustle for part of her living will be laying eggs while the overfed hen will be serenely digesting her food and quietly waiting for her owner to bring her more.

By giving the layers not more than they will relish in the morning, and scattering some small grain in the litter, they will start scratching and will keep it up until their crops are filled. At night they can be given all they will eat of acceptable foods, varying as frequently as circumstances will allow. With a variety of foods there is but little excuse for overfed hens even when they are confined.

Illinois.

Coy C. McCuan.

FURTHER HINTS ON FATTENING.

As a result of an investigation of methods employed in fattening poultry on an extensive scale the Department of Agriculture, in a bulletin just issued, suggests that the average farmer may obtain greater profit from his surplus fowls through a better system of feeding. Expensive equipment such as used by the big commercial plants is, of course, out of the question. Fowls can be put in fair condition by simply supplying a liberal amount of grain daily. It is best, however, to confine the market fowls in pens or fattening crates for two or three weeks previous to marketing, feeding them liberally on corn meal, wheat flour, or oat flour, mixed with skim-milk or buttermilk. The big fatteners use milk in some form almost universally, finding it a most essential and not expensive constituent of the fattening ration. The investigation referred to seemed to show that milk has a very important influence on the digestive process, keeping the fowls in good condition under forced feeding.

HOW A HEN PAYS HER WAY.

A hen that lays regularly will pay for her food and for reasonable care with a margin of profit over, even though she takes a vacation during the moulting period. A hen that eats what would otherwise be wasted, and turns it into a merchantable product, is yet more profitable. And the hen that eats injurious pests and insects, that menace the farm crops, turning them into eggs and meat for her owner, has reached the maximum of profit. Her possessor is pardonable if he places an apotheosis of her above his barn's peak, or if he guards her eggs as trophies and sells them only at high prices.

The real problem that confronts the owner is how to direct her energies bugward without exposing her to the beguilements of planted seeds and young vegetation, for the average hen is as perverse an Eve as ever ranged a garden. If possible, loosen up the soil and let the poultry have their turn before and after crops are planted and harvested. Most

of our troublesome garden insects hibernate in the soil and, even late in the season, the flock can do much toward their extermination. Potato beetles, squash beetles, cutworms and such pests may be considerably lessened in numbers on ground over-run with poultry. Many fruit tree pests are also vulnerable to the busy hen while in the larval stage. Wormy apples that fall from unsprayed trees yet contain the worm or larva of the codling moth, which will in turn work harm to succeeding crops. If possible, let the fowls work among these. Hens will clean up around peach trees from which the borers are being removed. Let them have access to the excavated area around each tree, leaving it open for a day or so. Small borers that escape your notice will readily be picked up by the fowls. The hen may also be trusted in the asparagus patch at all stages of its growth.

New Jersey.

M. R. CONOVER.

THE HONEY MARKET SITUATION.

For some time it has been apparent that the honey crop in this state would fall considerably short of the average. As early as July we published a statement as to conditions in other states which clearly indicated that the season's production for the entire country would not be up to the normal. Notwithstanding this, the information now comes to us that many Michigan producers have already sold or contracted their season's output at last year's prices. This is unfortunate and would seem to call for greater care on the part of producers in informing themselves regarding the crop situation, as well as for a better system of dispensing crop information to their members by the bee-keepers' organizations in the various states. Touching the present situation the editor of Gleanings, under date of Sept. 1, says: It is becoming more and more apparent that the honey season east of the Mississippi river and north of the Ohio has been more nearly a complete failure than for many years back. While there are bee-keepers here and there who have been favored with exceptionally good crops, the great mass of producers throughout the northeastern portion of the country have secured no surplus; and those more favored have hardly enough to carry their colonies into winter quarters without feeding. Clover and basswood honey will be scarce this year—particularly in the comb.

The conditions west of the Mississippi have been much more favorable. It would appear that in that section of the great west there will be a fair crop of alfalfa. Some of the other alfalfa states will have from a light to a fair crop. California, from the latest reports, taking the state as a whole, has had a good crop. Some bee-keepers in the southern portions of the state, however, will have a much lighter yield than they expected. Consumers in the east will have to take western honey. It is just as good, but the flavor is different.

RIGHT CONDITIONS FOR KEEPING HONEY.

Extracted honey, if brought to a temperature of not over 160 degs. F., bottled and sealed while hot, will usually, if kept in a uniformly warm temperature, keep liquid for a year or more. Indeed, I had some fine clover honey, which had been treated in this way, keep liquid for two years. But there is a great difference in honey. Some will candy much quicker than others. The ripper—that is, thicker—the honey is, the longer it will remain liquid. A cold atmosphere is quite favorable to candying of both extracted and comb honey. The temperature of the storage room should be about that of a living room—70 degs. Higher would do no harm, but is inconvenient and expensive. Cellars and cold rooms, especially when subject to freezing, are poor places for honey. In melting candied extracted honey the temperature should not go above 160 degs.; otherwise the fine flavor will be, in a large measure, destroyed. The usual way is to place the vessel of candied honey in another larger receptacle containing hot water. In filling the 60-lb. tin cans with honey, particular attention must be paid to ascertaining when a can is full. My method is to place the can on a scale and make it balance at 60 lbs.

New Jersey.

F. G. HERMAN.

Good Advertising Results.

Chas. Ruff, St. Clair, Mich., breeder of single comb Brown Leghorns, writes as follows: "I had good results from my advertisement in the Michigan Farmer."

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ard hopper-cooled engine can be used. The Sandwich All-Steel Motor Press bales 2½ to 3½ tons per hour. Has self-feeder equipment. Takes double charge of hay. Has no condenser box—needs no foot tamping—feeds direct from fork. No balance wheels, no high-speed machinery. Fast, simple, strong, light of draft. We make presses with or without engines—wood frame and steel frame—horse power and engine power—in all sizes up to five-ton per hour capacity. Prices reasonable. Drop us a line today for new book about the Astounding Profits in Hay Baling. Let us tell you more about the wonderful Sandwich Motor Press.

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"EGGMAKERS"—S. C. Brown Leghorn Cockerels. State wide reputation. I can suit you. Write me. Wm. J. Cooper, Mt. Pleasant, Mich.

EGGS: EGGS: EGGS—White & Buff Orpington, White & Barred Rocks, Black & White Minorcas, White & Buff Leghorns, Rose & Single Comb Reds, Houdans & White Crested Blk Polish. H. H. King, Willis, Mich.

RINGLET BARRED PLYMOUTH ROCKS—Fine, healthy, well Barred cockerels and pullets at right prices. R. J. SCHLONER, Pigeon, Mich.

THOROUGHbred S. C. Brown Leghorns. A fine lot of COCKERELS at right prices. LEWIST. OPPENLANDER, R. No. 4, Lansing, Mich.

R. C. B. Leghorn Cockerels—Kulp strain, the best in season. O. W. WAITE, Gobleville, Michigan.

SINGLE COMB BLACK MINORCAS—A few more pullets to spare. Eggs \$1.50 per setting. R. W. MILLS, Saline, Michigan.

LILLIE FARMSTEAD POULTRY
B. P. Rocks, R. I. Reds, W. Wyandottes and S. C. W. Leghorn eggs for sale, 15 for \$1; 25 for \$1.50; 50 for \$2.50. COLON C. LILLIE, Coopersville, Mich.

SILVER, Golden and White Wyandottes of quality, young stock after November 1st. Fine circular free. A few white roosters. C. W. Browning, Portland, Mich.

WHITE WYANDOTTES—Useful and beautiful. The kind that weighs, lays and pays. A. FRANKLIN SMITH, Ann Arbor, Mich.

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HOUNDS FOR HUNTING Fox, Coon and Rabbits. All ages, also terriers. Send 2-cent stamp. W. E. LECKY, Holmesville, Ohio.

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Only Spreader made having a beater that slides back out of the load when thrown into gear—no strain on the machine or the horses when starting.

Axes, cold-rolled steel—three times the strength of common steel. Special wheels of great strength—wood or steel.



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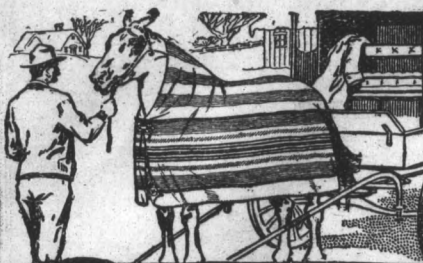
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Others brace to the spreader box. All driving parts compensating. Pressure of the load is against the cylinder, while the drive chain pulls forward, forcing the gears together. No lost motion—no getting out of mesh. The Success is the only spreader having these valuable features.

The Success spreader uses a steel pinned drive chain. It withstands the strain of frozen manure and obstructions in the load.

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dirty. A. R. Pett says: "It's a dandy. Sold 14 last night to my neighbors." Easy seller. Big profits. Going fast. Write quick. Free sample to workers. THOMAS MFG. CO., 8845 Wayne St., Dayton, Ohio

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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

WHY COWS GIVE BLOODY MILK.

Whenever the temperature of the udder is much increased or the circulation of blood much interrupted, a leaking of the blood may occur, and it is sure to mix with the milk. A rapid circulation of blood through the bag is very apt to be followed by slight dripping of blood into milk. It is also true that blood may escape with the milk from an injury to the udder. It usually follows an inflamed state of one or more of the four quarters of bag. Now let us briefly consider the most common causes of cows giving bloody milk. An inflammation of the udder very often follows congestion and congestion is brought on by over-feeding on too stimulating diet, exposure to cold winds and damp, cold storms. Allowing fresh milch cows to lie on cold frozen or damp ground during the day when the same cattle are accustomed to warm stables at night. Cows stabled in warm barns and allowed to stand in cold bleak winds out of doors are liable to attacks of inflamed udder. Poorly bedded cows very often give bloody milk on account of bruising the udder on the hard floors. Cows pastured on rough, uneven meadows very often bruise bag, especially if it hangs low. When cows step over logs, bars, door sills or out of ditches they very often bruise udder. I also find cows hooking each other bruise the udder, which is followed by giving bloody milk. In all cases a small blood vessel must open to allow blood to escape with the milk. A sudden change of fed from light diet to a very rich and nutritious one is another very common cause of bloody milk. Slight bruises of udder set up inflammation which is sometimes followed by abscess and a destruction of tissue, together with the opening of a small blood vessel allowing blood to leak into milk ducts; therefore, bloody milk may continue to come from a suppurating quarter. Cows very often give bloody milk the result of kicks or blows inflicted by the milker, horses kicking them or boys throwing pebbles, hard snow balls, base balls or other hard substances and striking the udder. Cows that are obliged to lie on rough, uneven stall floors or on too short a stall floor with deep gutter very often bruise their udder and as a consequence give bloody milk, or suffer from inflamed bag. Deep milkers that are hearty eaters and have large udders are most liable to give bloody milk; the light milker with small bag seldom have much trouble, unless they meet with an injury.

Treatment.

First of all, ascertain if possible, the cause and remove it. This you will find the most important step to correct a cow giving bloody milk. Without a removal of the cause it is unreasonable to expect drugs to give more than temporary relief. It should not be difficult for a dairyman to figure out quite correctly the exciting cause of his cow giving bloody milk. If it is the result of constitutional disturbance, such as over-feeding, congestion and choking of blood vessels in udder, it may be more difficult to make a correct diagnosis, especially as to the cause. In all cases it is the result of either exciting or constitutional causes. In the treatment of this ailment consider carefully the exciting causes which I have enumerated and by removing them, the cow will soon cease giving bloody milk. Showering the udder with cold water for a few minutes at a time two or three times a day will have a tendency to close the open blood vessel. Applications of hot water has the same effect in stopping hemorrhage and when the bag is congested or inflamed hot applications produce better results than cold. Dissolve ¼ lb. acetate of lead in a gallon of water to which add one pint tincture of arnica, makes a useful remedy for such cases; this lotion should be applied four or five times a day. It is also very important to milk her with care, for pulling and manipulating the teat roughly has a tendency to open the ruptured blood vessel. Another very good application is equal parts extract of witch hazel and water. In many cases where the bag is much congested and inflamed give one pound of epsom salts daily until the bowels move freely. It is also good practice to lessen grain supply, at the same time keeping bowels active. It is very important to bed well and if the calf is sucking her, his bunting may be the

cause of giving bloody milk. Keep in mind the causes of cows giving bloody milk and you can usually prevent it.
W. C. FAIR, V. S.

THE VALUE OF SILAGE.

It is a rather difficult matter to estimate the value of silage at all accurately. The reason for this is that it has a worth beyond the value of the feed elements which it contains. This increased worth consists in the digestibility of the feed fed in conjunction with the silage, due to the succulency of the latter feed. Data gathered by Jordan from an experiment conducted at the Maine experiment station shows that when cows were changed from hay to silage and hay, an increase of seven per cent in the milk production resulted, and that when the cows were changed from silage and hay back to hay alone, a decrease of eight per cent followed. This was due, not to the addition of digestible food material eaten, since enough less hay was used when combined with the silage to give each animal the same amount of digestible matter each day, whether fed on hay alone or on hay with silage. The above percents, if the work referred to would bring like results in all cases, form a basis for calculating the added value of silage above the exact measure of its digestible nutrients.

DAIRY NOTES.

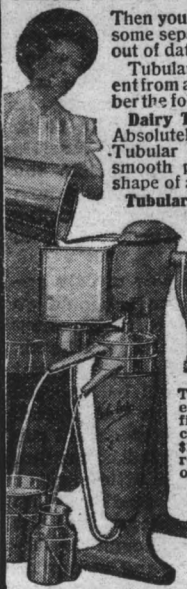
Dairymen who have given their business close study are generally agreed that it is not best to get cows in the habit of eating while they are being milked. If they have the habit formed it is difficult to get the animals to let down their milk without feed of some kind before them. Feeding creates dust and odors in stables which depreciate the quality of the milk.

The courts of Indiana have convicted twelve parties for selling "dirty milk" under the new law of that state prohibiting the sale of milk "containing visible dirt." One milk dealer was assessed a total of \$87.00 in fines and costs, it being his second appearance before the court for this offense. The enforcement of the new law is under the state food and drug department and the officials are seeing to it that the law is properly executed.

In a bulletin issued by the Wisconsin Experiment Station the question concerning the decrease of the number of creameries in that state is discussed. In this discussion the point is made that while the number of creameries has decreased this does not preclude that the amount of butter made is less. The change from the smaller to the larger creameries is largely responsible for the result. In some localities with fewer creameries larger totals of butter are being manufactured. The decrease in butter production occurs in these counties proximate to large centers of population where the milk is used to supply these cities instead of being churned into butter. The creameries of that state appear to be making the greater success and are becoming firmer established in those sections more remote from the large cities.

The American warehousemen's association report the amount of butter held in 35 warehouses on September 1 to be 57,805,000 lbs. as compared with 60,369,000 lbs. in the same refrigerator a year ago. The reported figures indicate an accumulation during the month of August to the amount of 3,222,000 lbs., for the same month in 1910 there were in storage 7,577,211 lbs., in 1909, 9,195,730 lbs., in 1908 there were 8,466,964 lbs., and 1907 over 10,000,000 lbs. The accumulations therefore, in the month of August this year are less than for any year since 1906. This condition is accounted for, in part, at least, by the fact that prices during the season have been lower than in the other seasons mentioned and less of substituted products have therefore been used. This statement is substantiated by the sale of oil in the Chicago district, which totalled 6,453,081 lbs. in August last year and 8,753,374 lbs. in the September following, there being an advance in butter prices of nearly 4 cents the latter month. The evident increase in the consumption of butter during the summer months and the reduction of storage accumulation ought to give the market an unusually firm undertone the coming winter. What effect the closer relations with Canada would have providing the reciprocity agreement is accepted by the Canadian electorate can only be determined by experience, but it is presumed that the influence from the other side will be more or less bearish upon our markets here.

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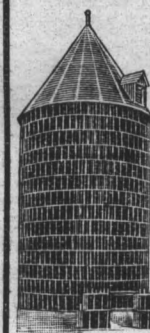
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VALUE OF BEET TOPS.

Will you please advise me as to beet tops. What can I afford to pay for them where it would be 2½ miles haul? Have a silo and nothing to put into it; have a chance to buy some tops but don't know what they are worth. Would like to know what they are worth per load or ton, or per acre. How many loads is there per acre of average stand?
Osceola Co. C. H. F.

It is a difficult matter to state the feeding value of beet tops as we have no scientific data on this subject so far as I know. Then, too, so much would depend upon the crop. One could much better determine their value per ton, and this would be largely a matter of opinion. I have fed my beet tops ever since I commenced to raise sugar beets, now several years, and my judgment is that a ton of beet top ensilage has as much value as a ton of corn ensilage, but as I say, this is largely a matter of opinion. When we feed beet tops we do not give the cows all they will eat twice a day. We feed it once a day and then corn silage for the other feed. As a matter of fact, if the cows are fed all they will eat at first they seem to stimulate the action of the kidneys and also of the alimentary canal and I would not advise heavy feeding of beet tops either fresh from the field or after they have been ensiled. I have estimated in a sort of farmer-like fashion that my beet tops are worth to me about \$10 per acre on the average, but there is nothing scientific or accurate about this at all.

Now this would be their value put in the silo or drawn to the barn and the labor in hauling and the care in handling ought to come out of that, so C. H. F. must take this into consideration. I don't think they are worth \$10 per acre in the field. If a ton of beet tops is worth as much as a ton of green corn, and I am inclined to think they are, if they are properly fed, then you can get some idea from that. We estimate that a ton of corn made into silage is worth \$3.50 but it wouldn't be worth that in the field; the labor must come out.

As long as C. H. F. hasn't anything to put into his silo he can pay perhaps more than the beet tops are worth, figuring their strict feeding value, in order to get a succulent feed for his cows.

ROUGHAGE FOR THE DAIRY HERD.

The shortage in the hay crop presents the problem of supplying sufficient roughage for the cows during the coming winter feeding period. The majority of dairy-men have silos and this will, in most cases, provide a way to satisfy the demands of the animals for the coarser grades of feed. But we note that, in several cases as indicated by inquiries and correspondence, many silos will remain unfilled because the owners do not have sufficient corn for that purpose, the weather of the past summer having failed to mature that crop properly. In many of these cases, however, these deficiencies can and will be overcome in part by filling the silos with sugar beet tops and sugar beet pulp as it comes moistened from the factories. Many farmers, however, are unfortunate in not having silos and will therefore, have to look elsewhere for their roughage. Most of these will depend undoubtedly, upon the dry corn fodder from which the corn has been husked, and it will likely be of interest to those farmers, as well as many others, to have a comparison published of the food values of corn fodder, mixed hay and clover hay.

The results of an experiment conducted at the Wisconsin station gives the following figures as regards the real value of these products: It required 2,374 lbs. of corn fodder to produce 1,120.1 lbs. of milk, from which 57 lbs. of butter were made, while of mixed hay it required 755 lbs. to produce 1,064 lbs. of milk, from which 56.1-10 lbs. of butter were made, and again, it took 643 lbs. of clover hay to produce 1,059 lbs. of milk which yielded 54.5-10 lbs. of butter. Concentrates were fed to all cows in like manner and quantity throughout the experiment. Results therefore indicate that one ton of mixed hay is worth about three tons of ordinary corn stover as a roughage for dairy cows, and that one ton of clover hay is worth somewhat more than three tons of corn fodder.

Put in another way, the experiment showed that it required 193 lbs. of corn fodder and 60 lbs. of corn meal and bran to produce 100 lbs. of milk, or 71 lbs. of mixed hay and 62 lbs. of corn meal and bran, or 60 lbs. of clover hay and 63 lbs. of corn meal and bran. While these conclusions will not be obtained in all instances because of the varying value of

hay, as well as corn fodder, due to the conditions under which, and the manner by which they were produced, the conclusions will prove a guide to the dairyman in determining the quantity of corn stover he will need to carry his animals over, providing he lacks sufficient hay.

WHY MILK SOURS.

The souring of milk is not unlike the souring of fruit juice or vegetable matter. It is due to the action of a particular kind of micro-organism which we call bacteria. These little organisms are a good deal like other forms of life in that they must have air, moisture, warmth and food in order to live, multiply and work. The particular food of a great many bacteria is sugar and the product which they manufacture is called acid. For instance, when the juice is pressed from the apple it is called sweet cider because of the sugar it contains. But soon the bacteria enter from the air, from unclean utensils, or from other surroundings and at once begin work upon the sugar which soon turns the cider hard and finally it becomes vinegar unless put into an airtight keg and kept in a cool place.

Composition of Milk.

Among the constituents of milk are water to the amount of 87.1 per cent, fat 3.9 per cent, casein 3.5 per cent, mineral matter .75 per cent and sugar 4.75 per cent. When the milk is first drawn it tastes sweet because of the milk sugar which it contains just the same as cider tastes sweet when it is first pressed from the apple. The average milk, as will be seen, contains nearly five per cent sugar which means about five pounds for every 100 pounds of milk, which, when changed into acid by the bacteria produces what we call souring.

Conditions Necessary.

To work best, these bacteria require warm surroundings of about 70 degs. F., of room temperature, besides they must have some air and enough moisture to keep their food, the sugar, in solution. The milk, the same as cider, has all these conditions present so, just as soon as it is drawn, the bacteria begin to work rapidly because, since the milk is warm all the conditions necessary are exactly right. Then, unless the milk is cooled they continue rapid work until all the sugar is changed to acid—the milk soured.

How to Prevent Souring.

Since these little organisms must first get into the milk then have a warm temperature in which to work, the way to prevent the milk from souring is to keep the bacteria out as much as possible then make the surroundings so cold that they cannot work. To do this have all surroundings, as yard, stable and stall in good sanitary condition, then curry and brush the cow at least with as much care and attention as is given the horse. Keep all pails, strainers and other milk utensils scrupulously clean and, finally, cool the milk to 50 degs. F., immediately after milking. Setting milk into an ice box, a cave or a cellar to cool is not a very good plan because of frequent poor ventilation and bad odors. A more satisfactory way is to make either a small vat, large enough to hold several shotgun milk cans, or cut a barrel into halves and provide with a well fitted cover to keep out all dust and shield the heat from the sun. By placing this between the pump and the watering trough, then run a spout from the pump to the cooler and another from the cooler to the trough, fresh cool water may be kept about the contents of the cooler at all times. The average temperature of well water is about 50 degs. F., so an arrangement like this is a simple, inexpensive and effective way to keep milk from souring.

N. D. Agril Col. G. L. MARTIN.

THINKS APPLES ALL RIGHT FOR COWS.—ALSO LIKES ORCHARD GRASS.

Noticing an inquiry in the last issue of The Farmer in regard to the advisability of feeding apples to cows I will give my experience. I have a large orchard which I keep seeded to orchard grass for a permanent pasture for my cows. They are turned in as soon as the grass starts in the spring and stay all the season and eat all the apples they want. In case of short pasture I think the apples help to keep up the milk flow. Danger from choking is very slight. I never have known one of my cows to get choked yet. I consider orchard grass one of the most valuable grasses for a permanent pasture that we have, especially in an orchard.

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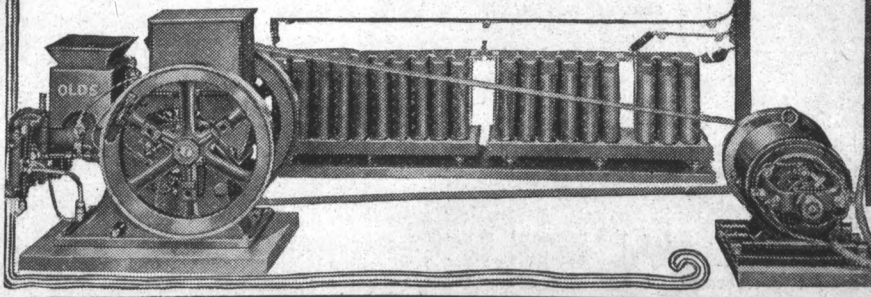
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DETROIT, SEPT. 23, 1911.

CURRENT COMMENT.

As announced in our last issue, we have established a new department which will run until the active farm campaign begins next year. The purpose and scope of this department were fully outlined in the announcement made under the department head in the last issue and in the editorial comment relating to it. The first of the lectures which will be included in the department will appear in this issue, and we trust that our readers will not only carefully read the lecture, but preserve the copy in order that a complete file of the papers containing the department may be available for future connected study. It is unavoidable that the early lectures in this department should appear to be somewhat elemental in character, but as the study of the principles of scientific agriculture progresses a large field of knowledge will unfold itself to which these elemental principles are essential for a thorough understanding of the whole proposition. We desire to make this department of the greatest possible value to our readers and to this end we bespeak their co-operation as above noted. Further plans with regard to the practical short course lectures will be announced as the season advances, as noted in the last issue.

In the meantime the farm laboratory established in connection with this work will be available to our readers as outlined in the last issue.

The practical articles which have been published on our special topic for September have been helpful for the present solution of the marketing problem as it confronts the average farmer, but the final solution of the problem in a satisfactory manner involves more than an individual solution, since the best results in the marketing of farm produce cannot be gotten by the individual farmer working separately and alone. Every experience has shown that the best results in the distribution and marketing of the farm products cannot be secured without co-operation between producers.

An experienced railway man, who has studied the proposition not alone from the standpoint of the transportation companies, but as well from that of the

producers and consumers, is authority for the statement that for every dollar the farmer gets for his products the transportation companies add a dollar and the middleman another dollar, making three dollars that the consumer pays for his food products as against one dollar which the producer gets. This is perhaps a little overdrawn, but it is largely corroborated by statistics gathered from other sources, which show that farmers get only about 35 per cent of the consumer's dollar, under existing conditions. Of course, the producer can never get what might seem to him to be his full share of the consumer's dollar, but it is possible, by wise co-operation in marketing, to get a very much larger percentage of that dollar than he is getting at the present time.

Frequent reference has been made in these columns to the remarkable progress of co-operative marketing in Denmark. A recent report from Vice-Consul Young, at Amsterdam, shows the remarkable growth of co-operation in northern Holland, where agriculture is perhaps more thoroughly organized than in any other country, save Denmark. According to published statistics, the number of members in the various kinds of rural associations is as follows: Provincial farmers' associations, 56,000; agricultural societies, 31,500; stock growers' organizations, 2,400; various rural co-operative societies, 38,000. Aside from and connected with the general organizations there are small co-operative enterprises, in which various classes of business connected with the farm and home are successfully carried on.

The vital point in connection with the above figures is the fact that in the last decade the agricultural products of northern Holland are shown to have increased by about 75 per cent, which is largely attributed to the effect of co-operation, which has facilitated the marketing of their products at an increased price. There is room for a wide growth of this kind of co-operative enterprise in Michigan, and with the start which has already been made in some communities, there is every reason to believe that a great growth of this kind of marketing will take place within the next decade. It is not too early to discuss this problem or to take advantage of the possibilities which co-operative marketing affords in every farming community in Michigan.

The magnificent display in all Departments at Comstock Park

last week was renewed evidence of the fact that the officials and directors of the Western Michigan State Fair are well entitled to use the name "State" in connection with their annual exposition. The addition made to the fair grounds was available for this year's exhibits and gave much more room for the placing of the machinery display to advantage than has been available in former years. The loss of their grand stand by fire shortly before the recent race meeting was a bad blow to the organization, but the officials promptly took measures to make this felt as little as possible by the erection of a large temporary grand stand, which served a very good purpose for the fair as well as for the race meeting. Everything was in order for the opening of the fair on Monday and the attendance was good from the start. On Wednesday the grounds were thronged with a crowd of visitors that taxed the ability of the street railway to convey from the grounds at the close of the day. The exhibits were fully up to the high standard that has been previously set at this big show. Some departments showed a phenomenal increase in the number of exhibits, while the quality was much better than ordinary and compared favorably with any exposition of the kind.

The live stock classes were all well filled and in several of the departments numbers of the exhibits had to be housed in temporary quarters provided by the erection of large tents for the purpose. The horse exhibit was particularly good, the draft classes being strong, while the exhibits all along the line to the Shetland Pony class were representative of the best of their kinds, not only in Michigan but in the country at large. Of the draft classes the Percherons attracted the most attention and the quality of the entire exhibit was well illustrated in the six-year-old Percheron mare "Kate," from the Finch Bros.' stables, which won the grand championship for the class and will be a championship candidate at the International this fall. There was also a good showing in the

other draft breeds as well as in other classes of horses, making this department of the fair the strongest ever put up at Grand Rapids.

The cattle classes were likewise well filled with a good representation of the leading popular breeds of both beef and dairy cattle. The increased importance of dairying in Western Michigan was well shown by the number of local exhibitors, of dairy cattle, including Holsteins, Jerseys and Guernseys. There were also a number of fine herds of these breeds shown from other sections of the state, among them some that have not recently been exhibited at Michigan fairs, making this department of the show particularly strong. The Shorthorns were also well represented; the dual purpose Red Polls were a good class, while the Angus breed was in evidence as usual.

The sheep classes were also well filled with a part of the exhibits housed in tents. Both fine wool and middle wool classes being exceptionally strong, the Merino, Rambouillet and Shropshire classes being particularly fine. Something more of the details of this exhibit will be mentioned in a future issue.

The hog department was well filled with a good representation of Michigan breeders, many of whose exhibits will also be seen at the State Fair this week.

The poultry exhibit was the "greatest ever," 1,540 exhibits being included in this show, by far the largest ever put up at Grand Rapids. This department has become so strong under the management of Supt. Russell that it is stated that the fair officials contemplate a new and larger building for housing the poultry exhibits at future fairs.

The horticulture exhibit was, as usual, one of the most attractive features of the fair by reason of its location and the interest of the local fruit men. This show is always especially strong at Grand Rapids and this year was no exception to the rule in this regard. The Western Michigan Development Bureau had a fine exhibit and Secretary Gibson was on hand to meet all comers. The agricultural exhibit was also very creditable and these two exhibits being housed in a large building with wide aisles and good light were admired by thousands who gained easy access to them. The Agricultural College had an instructive exhibit of which the grains and seeds with data relating to their production was an important factor.

The machinery exhibit was complete and comprehensive in character, with a full line of agricultural implements and equipment represented, including a number of silos which were erected for exhibition purposes, some of which will remain as permanent features of the fair for future years. Unique among the exhibits in this department and worthy of special mention in connection therewith was the exhibition of the International Harvester Company, which was devoted to the showing of stereopticon views and moving pictures, illustrating a lecture which was given to crowded audiences on the "Romance of the Reaper," showing the development of harvesting machinery from the days of the sickle to the present day perfection of harvesting machinery and illustrating many processes in forest, mine and mill by which the material is gathered and the finished product prepared for the use of the farmer.

The exhibit in the main hall was varied and interesting in character being well supported by Grand Rapids business men in general.

The educational exhibit from the schools of Western Michigan was larger than ever before and worthy of special mention. Specimens of students' drawings were very numerous and many of them of a high class, the entire exhibit being a revelation regarding the modern school, both city and country. One wing of the art hall was occupied by the D. A. R. in which the colonial occupations of the housewives of former days were fittingly depicted. The decorations were lavish and altogether the exhibit in this department of the fair was most creditable.

Among the free entertainment features the daily flight of a Wright aeroplane were most attractive to a large number of visiting patrons, many of whom here saw the flight of a bird-man for the first time, while the mad rush of racing automobiles about the track was scarcely less awe inspiring. The usual array of midway features furnished diversion for many, while the horse races was an enjoyable factor for those who revel in that sport.

Unfortunately, the weather man was

unkind and Thursday, which was farmers' day, otherwise would have been the biggest day of the fair. The cold morning and the hard rain at mid-day dampened the enthusiasm of many, although there was a good attendance despite this misfortune. Altogether the Western Michigan State Fair for 1911 may well be said to have been the most successful from the standpoint of the exhibits made that has yet been held in Western Michigan and promises well for the future of this great educational exposition which is annually held on the west side of our great agricultural state.

HAPPENINGS OF THE WEEK.

National.

Ten persons are dead as the result of an automobile crashing through a fence at the fair grounds at Syracuse, N. Y., last Saturday.

Survivors of the Seventh Michigan Cavalry, a regiment that distinguished itself in the Civil War, held their annual re-union in Detroit this week.

Commerce of United States with foreign countries during the month of August, closed with a balance of trade exceeding \$18,000,000 in favor of American business men. The balance of trade in favor of the United States for the eight months ending August 1, amounted to \$252,041,089.

John D. Rockefeller, Jr., while overseeing workmen who were erecting an addition to his father's house, barely escaped being struck to death by falling steel which injured many of the workmen.

President Taft has vindicated Dr. Harvey Wiley, as regards the charges made against that official, which resulted in a congressional investigation. In his communication, the President suggests that there may be changes made in the department of agriculture.

President Taft was the guest of Detroit and Pontiac on Monday. He dined with the Detroit Club at 7:30, took a running trip to Pontiac where he made an address, returned to the State Fair grounds of the Michigan Agricultural Society and opened the great fair for its 1911 exhibition, was then rushed to the Wayne Gardens at which place he spoke before the Detroit Board of Commerce, after which a short trip to the Cadillac Hotel was made, where he met the revenue men and expressed his opinion that it would be better if the revenue department was placed on the civil service list, thus removing it from politics and saving time and money. All along the route of his travels, President Taft was greeted by crowds of citizens.

Congressman E. H. Madison, of Kansas, one of the leading insurgents in the recent congress, was stricken with heart disease at Dodge City, Kansas, while at breakfast Monday morning.

Robbers secured \$2,000 from a bank at Lignite, North Dakota.

It is announced that the Trans-Atlantic steamship lines have made an increase of 10 per cent on the rate on freight and also \$1.25 on third-class passenger rates, the changes being made to offset the loss suffered by reason of the recent strikes in England.

In his report to the war department, Brigadier-General Miles raises a grave question in showing how a state may interfere with army maneuvers, by pointing to the experience with South Carolina, which state has statutes prohibiting the running of special trains on Sunday, obedience to which statute prevented getting troops to Chicamauga Park on schedule time.

Foreign.

Elections were held in the state of Coahuila, Mexico, Saturday, and Venustiano Carranza was elected governor. The election was attended with much excitement and rioting in some localities. This is the first time in the history of the state that the peon class has voted.

The high prices of food and other necessities of life was the cause of riots in Vienna, Austria, Sunday. For a time the police and soldiers were unable to control the mobs and considerable property was destroyed before the troops were ordered to charge the disturbing rioters. Unless relief is secured, serious consequences will probably develop.

Reports are circulating that cholera is now raging in many towns and villages in southern Italy, especially in the provinces of Calabria and Sicily. It has been the effort of the Italian officials to suppress news regarding the spread of the disease, in that the tourist business would be greatly hampered by a general knowledge of sanitary conditions in that country. Recently, however, riots at Verbicaro were started because the government does nothing towards the eradication of the plague.

On Thursday of this week, elections will be held throughout the Dominion of Canada. The issue causing the government to go to the people was the consideration of the reciprocity agreement between Canada and the United States. Not since the days the provinces were joined under one government have the Canadian people been stirred over public questions as today. Both the conservatives and the liberals are claiming victory.

While official information cannot be given as regards the situation between France and Germany over the Morocco question, it is reported that in her reply to the proposals of Germany, France declared that she would not yield a single point. Germany's financial condition, it is declared, must ultimately compel her to pray for settlement, and the implication is that through this channel, France will finally gain her declared rights in Morocco without going to arms.

An advanced report of the geological

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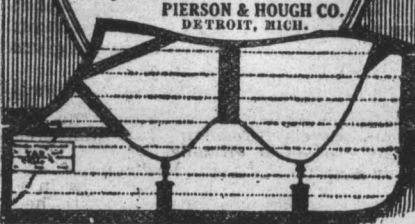
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survey of the Canadian government, shows the mineral production of Canada for the year of 1910 to exceed \$105,000,000, which is an increase of over \$13,000,000 over the production of the previous year.

P. A. Stolypin, Prime Minister of Russia, who was shot during a performance at the Municipal Opera House, Kieve, Russia, died from his wounds on Monday evening. With Stolypin's strong hand silenced, it is feared that general disorders will follow in the great northern country. His views were in many cases radically opposed to the old aristocratic regime, but his great executive ability compelled his recognition and enabled him to further his policies, much to the help of the peasant classes. The Jews are terror stricken over the situation as it now develops, since the late Prime Minister was a protection to them and a strong supporter of their cause.

Peru has placed an order for seven submarine boats with ship building concerns of the United States. She has followed Argentina in this regard, who has two battleships of the largest type, now under construction in this country.

CROP AND MARKET NOTES.

Mecosta Co., Sept. 12.—The drought has finally been broken by some very-nice rains throughout this month, and with a few more days before we get any frost we will have an average potato crop. Pastures are freshening up and cattle are looking better. The corn is all cut and some are husking now. Lots of peaches selling at 50¢/75¢ per bu. Plums were a good crop and sold at \$1.15 per bu. A good many fall apples, selling at 25¢/40¢ per bu. Not many winter apples, though what there are of good quality. Quite a lot of pears and are selling at 75¢/\$1 per bu. Hay is scarce and worth \$18 per ton loose, and hard to get at that price. Horses are selling at about the same figure as they did last spring. Hogs are 6 1/2¢ per lb; cattle, 3 1/2¢ per lb; eggs, 15¢ doz; butter-fat, 24¢ lb; butter, 16¢ per lb.

Genesee Co., Sept. 16.—Weather quite like fall, with frequent rains during the past week. Bean pulling under way and growers hope for favorable conditions for curing. Corn cutting and silo filling quite general. Corn better than was anticipated. Farmers beginning to appreciate the silo and a larger number than ever are being erected and filled. Considerable wheat will be put in this year as the yield was good the past season as a rule. This county is fast becoming a dairy community. Good roads now being constructed will be added to another year which will facilitate traffic generally.

Lapeer Co., Sept. 9.—Weather cloudy and unsettled; soil moist for drilling in wheat now. Farmers cutting clover seed and pulling beans. There is but little corn cut as yet. Frosts the last week in August touched the corn, beans and other vegetation on low lands in some localities. The potato crop is putting in its time now and if no more frosts occur will be ready to dig in about 20 days. Those that have buckwheat will get big price this fall. Farmers are baling their hay crop and hauling to the cars. Potatoes hold firm yet at this point at 75¢. Prices for hogs and cattle are nominal and as to sheep all feel uneasy on account of reciprocity. The oat yield is small for the big growth of straw this year.

Northern Antrim and Southern Charlevoix Co.'s.—Now that threshing is completed the grain yield has fallen short of expectations with most farmers, especially wheat, the cause being shrunken grain. Wet and cool weather has delayed the ripening of corn and beans and shortened the yield some, but these crops are good, while cucumbers are only half a crop. Late potatoes promise a big crop, also sugar beets. Pastures are very good and some good second cuttings of clover. Splendid conditions for sowing wheat and many newly sown fields are up and looking good. There is a good crop of pork in this locality, also lots of little pigs. Potatoes, 65¢ per bu; apples, \$1 per bbl; pork, 8¢/8 1/2¢, dressed; eggs, 18¢/20¢; butter, dairy, 22¢; butter-fat, 24¢/26¢ per lb.

MICHIGAN CORN IMPROVEMENT ASSOCIATION.

Annual Corn Show and School.—The mission of the Michigan Corn Improvement Association, organized something like eight years ago, is too well understood by Michigan Farmer readers to make a further lengthy explanation necessary. This is purely a voluntary society with no other source of revenue than the dollar membership fee which is charged annually. Its officers, past and present, who have given their time to the work of the Association, have received no compensation.

Heretofore the Annual Corn Show, held under the auspices of this association has been in connection with the annual Round-up Institute. The next show is to be held at Western State Normal School at Kalamazoo, in January, 1912, the faculty of which school, in co-operation with the managers of the corn show, will provide a series of lectures on rural progress, the rural school and other topics relating to country life. A musical program will also be given during the week and a physical training exhibit will be held. In connection with the show a boys' and girls' contest will be held and substantial prizes will be given.

A preliminary prize list for this eighth annual corn show of the Michigan Corn Improvement Association has already been prepared, and may be had upon application to the secretary of the association, Mr. L. J. Bradley, of Augusta, Mich. It contains an illustrated list of the valuable prizes which have been donated for the purpose of stimulating a good show, as well as the score card which is used in the work of corn judging.

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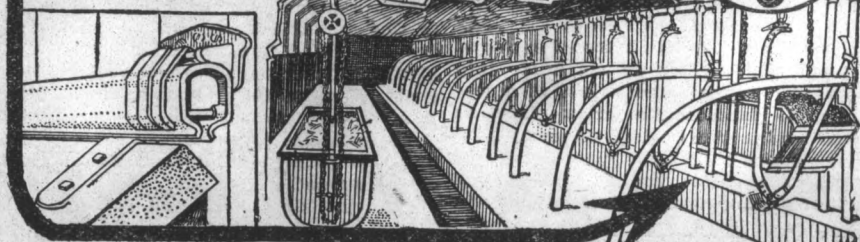
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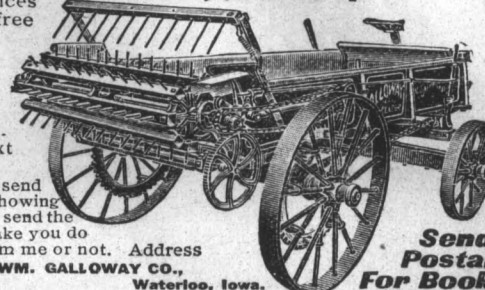


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HORTICULTURE

BULBS FOR FALL PLANTING.

The first killing frosts of autumn marks the beginning of activities in the garden after the lull that comes with full development in the summer garden. Much active work will be in evidence from this time on until severe cold weather and no part will be of greater importance than that of planting of bulbs for spring blooming.

Coming before even the earliest of the early blooming shrubs, the bulbs make beautiful the garden for some weeks of spring, and should be planted as liberally as time, money and space permit. Fortunately, at this time of the year time is more available than in the crowded days of spring and as a few bulbs can be tucked in almost anywhere among perennials, shrubs, in the grass of the lawn, as well as in entire beds, the space for them is usually available. Cost is scarcely to be considered in such bulbs as crocus, narcissus and tulips and by no means a serious item in the more expensive hyacinths and lilies.

The best soil for the growing of bulbs is a warm, well drained, sandy loam, and a warm, sunny situation is to be preferred as this class of flowers bloom in early spring ere the sun has reached its zenith and the ground is still moist and cool. Bulbs of most sorts may be planted any time after they are received from the florists, which will be after the first of September for narcissus, tulips, crocus and all those bulbs which ripen their foliage in early summer, until the ground freezes, but it is always advisable to get them in as early as possible so that they may make some growth before the ground freezes. Hardy lilies do not come into the market as early and it is a wise precaution to place one's order in season so as to receive the earliest shipments.

Well drained soil is an important factor in the successful growing of bulbs as water standing about them, especially in the case of lilies, almost always results in injury to the bulbs if it does not destroy them outright.

Where entire beds of tulips or hyacinths are to be grown, the beds should be well spaded and worked over and a portion—some three or four inches, of the surface soil laid one side to cover the bulbs after they are set; this will be found a more convenient method than making holes for each separate bulb. On this finely prepared bed lines which cross each other at right angles five inches apart for tulips, or seven inches for hyacinths should be marked and a bulb set at the intersections of the lines. This brings the bulbs an equal distance apart each way and if desired the intervening space may be filled with crocus, scillas or some other small bulbs. Winter aconite is a charming spring bulb, blooming the earliest of all, but should not be set more than two inches, or less, deep. After the tulips, etc., are placed in position the earth should be carefully spread over them, care being taken not to upset the bulbs, and the surface of the soil leveled off, leaving it somewhat higher in the center than at the edges so as to shed water.

In selecting tulips for mass planting care should be given to selecting those of uniform height and an equal season of bloom; do not plant early and late blooming varieties in the same bed, nor bulbs of inharmonious colors, as yellow and red. If it is desired to grow mixed bulbs better plant them in the border or as an edging for beds of perennials where irregularity of color, bloom and height is not unpleasant. White may always be used with confidence, either alone or in combination with any other color.

Unless used for filling in beds of other bulbs I find crocus more satisfactory when planted in the grass of the lawn where they will come into early bloom and be out of the way before the grass needs close cutting. In planting crocus always see that selection is made of the mammoth-flowered sorts as these will give, not only larger flowers but many more of them, from a dozen to twenty bulbs being not uncommon from one bulb. Of course, one will select the colors they prefer, but white and yellow are especially effective on the lawn. Plant about two inches deep, merely lifting a bit of sod, introducing the bulb and pressing the sod back over it again. Do not plant in formal lines or groups, but scatter the bulbs on the grass and plant them where they fall, this will give a natural

arrangement far more artistic than any formal planting.

Tulips which are planted in beds should be lifted when through flowering and heeled-in in some out-of-the-way corner until ripe, when they may be stored in paper bags in a cool, dry place until time to plant out again in the fall. Hyacinths should receive similar treatment.

Hardy lilies require much more care in planting but as they are the most valuable of all our garden treasures they well repay the extra care. It is seldom an advantage to plant lilies in beds by themselves, rather should they be planted in the hardy border or among shrubbery where they will have protection through the heat of summer. The soil should be well drained and the bulbs set much deeper than in the case of tulips and hyacinths, nine inches being none too deep. After making a sufficiently large and deep hole a little sand should be placed in the bottom, and if one has it, a little pad of sphagnum moss and the bulb set on this; place sufficient sand over and around the bulb to cover it before filling in the soil; this tends to keep away worms which are very injurious to lily bulbs. If one is planting the Kramerli lily, which is especially susceptible to damp and inclined to rot, generous use of sand should be made and it is a wise precaution to turn the bulb on its side so that moisture may not settle inside the scales. If scales become broken from the bulbs do not throw them aside but plant in sand, each scale will produce a tiny bulb which in time will bloom. Where a bulb is so injured by worms or decay as to be useless as a bulb, the scales may be separated and used for propagating, nearly every one having a sound base, will grow.

Hardy lilies may be planted any time that the ground can be worked, even up to Christmas, but the old-fashioned garden lily, Candidum, should be lifted and planted during its season of rest in August as, after that time, it starts into growth and should not be disturbed. Candidum lilies should, unlike other hardy lilies, be planted quite near the surface of the ground.

The most desirable of all garden lilies is, without question, the Auratum, and these should be planted by the dozens or hundreds if possible. Japanese lilies are easily grown and are quite permanent when once established. They are beautiful, showy lilies, useful for the front or beds of more erst-growing sorts and require the same general treatment.

Of other spring-blooming bulbs which are suitable for general culture, none is more charming than the anemone, both the single and double varieties. These should be planted an inch deep and about five inches apart, and the bed well protected with dry leaves and covered with boards or boxes to shed rain as they are rather susceptible to cold and damp. The litter should be removed gradually in the spring and a portion of it kept handy to replace in case of a cold snap.

Narcissus should be established as borders along the shrubbery as they are far more effective in long rows than in beds. Set the bulbs twelve inches apart and four inches deep. The narcissus increases its bulbs by throwing out new bulbs in a circle around the old bulb, so need this greater amount of room to make a natural increase and, once planted, should not be disturbed for several years.

A top-dressing of old, well decayed manure placed over the beds is a benefit but fresh manure should not be used, nor should old manure come in direct contact with the bulbs. Daffodils, jonquils, and all varieties of narcissi require the same treatment and are absolutely hardy and of easiest culture.

After the anemones have bloomed and ripened their foliage they should be lifted and stored in paper bags until time for planting out in the fall again.

Branch Co. I. D. BENNETT.

CULTIVATING A WILD CRANBERRY MARSH.

We have a piece of swamp which has, in years past, raised good crops of cranberries naturally, but lately the "zander" brush has nearly crowded the cranberries out. The natural growth is casandra and sphagnum moss. A growth of huckleberries, spruce, pine, maple, and tamarack is gradually encroaching on the edges of the swamp. There is no head of water to flood at will but the moss is full of water the year round. Good sand is available. Would it be practical to attempt cultivating the cranberries under these conditions? If so, what is the best way to go at it?

Kent Co. I. J. H. One could, of course, tell much better what he would do in a situation of the kind mentioned, if he could see this prop-

erty. However, from what you state, we believe it would be practical for you to attempt cultivating cranberries in this marsh; it is desirable to have a supply of water to flood cranberry marshes but it is not necessary. With it one is almost assured an annual crop, without it, providing the other conditions are favorable, one is certain to secure good returns for his labors and the use of his property.

We would recommend that you first clear off the cassandra and other shrubs and growths, level off the ground, and summer fallow the land for a season, after which, prepare the surface as for a garden. Then I would haul clean sand and cover the surface about four inches deep all over the marsh, or at least over that portion you wish to devote to cranberries. It is desirable that the sand be free from clay or loam, and preferably coarse. Any substance that tends to bake is objectionable. This sand offers a good medium in which to start the young plants, is easily cultivated and, from the experience of men who have given a great deal of attention to the production of this fruit, it encourages fruitfulness.

If the plants you have on this marsh or in your community are productive, we believe it would be wise to use them for propagation. The importation of varieties from outside districts has not always been followed by success, and so if you are in possession of fruitful plants you had better use them, as you would then take little chance of getting plants that would produce large quantities of fruit. This, of course, presumes that the fruit of the plants you have is of the right quality.

There are several methods of planting. A good way is to mark out the sand, after it has been thoroughly prepared, by running marks eighteen inches apart each way, at the intersections of these marks place cuttings, which are made by cutting the vines in lengths about ten or twelve inches long. Force the large ends of the cuttings down through the sand into contact with the bog lands below. It is best to do the planting in early spring, especially where you do not have a flowage. Keep the plantation cultivated thoroughly afterward.

CONCERNING THE FRUIT AND VEGETABLE MARKETS.

Wolf River apples have sold as high as \$4.25 per bbl. on the Cincinnati market; Maiden's Blush and Duchess are selling at \$3.00 to \$3.50 per bbl. While inferior apples are a drug on the market, the scarcity of fancy fruit is keeping the price firm.

Estimates of the Cape Cod cranberry crop, since harvesting has begun, is placed at 20 per cent below earlier calculations. In New Jersey the crop promises to be 10 per cent shorter than earlier estimates. It seems that the berries are small and most of them are on the outside bearing surface of the vine, which fact caused early estimates to be placed higher than picking proved to be the fact.

At the closing of last week, the peach market at Chicago showed considerable improvement. Michigan Albertas were arriving in fairly liberal quantities, but met a very active demand, and the trade is keeping the fruit well cleaned up. It is thought that the market will handle the large Michigan crop much better than many expected earlier in the season.

A survey of the cabbage outlook in the two chief producing states, New York and Wisconsin, show that the crop in both sections has suffered materially through adverse weather conditions. In most localities the summer has had some bad spots, either too little, or too much rain for the good of the plants.

Prof. U. P. Herrick, formerly at the head of the Horticultural Department of the M. A. C., and well known among Michigan fruit growers, recently made a trip of inspection through Michigan orchards and reports that his observation leads him to think that the peach industry of the state is on the wane. As for the apple crop this year, he found fall apples to be plentiful, but winter apples are scarce, and he predicted that in November fewer apples will be found in Michigan and New York, than at this time a year ago.

Many of the apple grower of New York state are using the box this year instead of the barrel. To encourage the use of the box, a school has been started at Rochester, under the auspices of the Growers' and Shippers' Exchange of that city, for instruction in the proper methods of putting the fruit in this receptacle. Teachers are furnished by the state university.



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Goen and Mealy varieties.
Goen wheat is a wonderfully hardy, productive red wheat; stiff straw, bearded, and one of the best all around wheats I ever grew.
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PRACTICAL SCIENCE.

ORIGIN AND FORMATION OF SOIL.—1.

The story of the origin and formation of the soil is a story of the beginning of created things. It takes us back, away past the memory of man to a period in the evolution of the universe when darkness gave way to light and chaos surrendered to order and law.

How the once molten masses of rock became solid after the lapse of centuries of time and how the everlasting, never-tiring agents of nature by steady pressure and unceasing obedience to their own inherent instincts accomplished the gradual demolition of rock, is the truth which geology so delightfully unfolds. Indeed, one needs no stretch of the imagination to believe the story of the formation of the soil from the gradual reduction of rock, if he will but observe the many present day examples of such processes and inquire a bit into the changes that are hourly going on within the soil at his feet.

A trip to Pike's Peak in the Rocky Mountains, to the Garden of the Gods at Manitou, Colorado, to the awful Gorge of the Niagara or to the Grand Canon of the Colorado, will convince even the most skeptical, it seems to us, that the same relentless agents are as active today as ever. Away up the slope of Pike's Peak, the frost, the rain, the snow, the atmosphere, have been busy all these centuries crumbling the rock and making it suitable for vegetation and for man. And both have responded. Up, up, so far as warmth will encourage, vegetation has stretched its subduing influences. Slowly, slowly but surely, the rocks have crumbled, a soil has formed and vegetation, accepting the invitation, has woven its fabrics among the particles thus formed.

Had we time and were there no danger of becoming side-tracked, so to speak, it would be interesting to follow more closely the story of the earth. On the time, ages, and ages ago when the earth was without form and the molten mass was revolving upon its axis, the day shortened to perhaps three or four hours, we cannot dwell. To at all comprehend the changes which the earth has undergone since it became a body of such density that it occupied a more or less fixed position in the heavens, it is necessary to forget time as we now consider it. The human mind is not capable of grasping, or even imagining, what an almost eternity is represented in the changes which this planet has undergone. We may, in our fancy, imagine perhaps the span of years (many thousand they must be), that have witnessed the gradual carving of the Niagara Gorge. Year by year, inch by inch, water, ice and air have surely performed the work which there is manifest and which now excites the admiration and the awe of the world. This period of time, ages though it may seem to us, is yet brief indeed, compared with the prior period of the earth's existence.

What a fascinating story it all is, and how few of us have any conception of the stupendousness of the problem and the beauty of the theme. Compared with the awful grandeur of the preparation of a place in the universe for a race made in the image of Him all else sinks into insignificance. With this story we cannot deal at this time. We fain would touch a few points which science has illuminated in order that perhaps some few may be encouraged to read more closely the story of the building of the earth. But into these even we must not now delve.

It must be sufficient at this point to note that the same agents which have brought the earth from a mass without form to its present condition are still relentlessly at work. Water, air and sunshine, the forces which have been potent throughout the ages in the subjection of the earth, are the forces which are today fundamental in the making of this planet habitable.

Sunshine may be considered the stimulating force for all life activity. We are familiar with the fact that, although the sun is the direct source of sunshine, yet the amount of heat obtained therefrom does not depend directly upon the nearness of the object to the sun. Were this the case, the tops of our mountains would register slightly warmer than the valleys and plains. We, of course, know that the exact opposite is the true condition. When the sun is shining brightly through

the window pane, we will find the window glass quite cool while the room inside may be real warm; the glass on a greenhouse will be found cold, while the greenhouse itself may be at tropical temperature. Even under the equator, mountains rise into the air, the peaks of which are snow clad. The air and the glass convey the waves of heat without becoming heated thereby, but when the waves strike the earth they are transformed, reflected and absorbed and the blanket of atmosphere which surrounds the earth to a depth of a few miles prevents the too rapid radiation of the transformed heat.

The presence of water in the air acts as a further check on too rapid radiation, or what is the same thing so far as the earth is concerned, the too rapid cooling. We are all familiar with the hot sultry days of summer, when an excess of moisture in the air prevents the escape of the heat and we are familiar with the attending physical discomforts of such a day.

Water has been one of the very active factors in subduing the earth. At a time when the earth was molten, the oceans could not have existed, but the water encompassed the earth—an immense envelope of water vapor (steam). The rapid cooling of the vapors in the upper atmosphere; the effect of the terrific bombardment of the condensed steam in the form of rain, and its evaporation in turn carrying through the surrounding turbulent atmosphere the expelled heat of evaporation, is the spectacle we would carry in the mind's eye could we dwell upon the early influence of water upon the earth.

The earth cooled. The vapors of water condensed upon the cooled surface of the earth. The earth slowed down in its revolution upon its axis because of the inertia of the immense body of water upon its surface, and the day became of the present time duration. Water, its work accomplished largely above the earth, now began upon the surface its activities with which in our studies of soil we have more certain knowledge.

With the final arrival of habitable conditions on the earth we find the influence of the water, air and sunshine very materially supplemented by the activity of living matter in the soil. With these several forces we now must deal in our study of the soil. We will find later, also, that coupled with our efforts to bring the rock into solution and subdue it for the benefit of crop production, it now becomes necessary to prevent the too rapid operation of these very forces which have been so active in preparing the earth for man.

Already have our people learned in a measure what it means to permit the fertile constituents of the soil to become wasted. There seems to be a period in the evolution of the soil that marks the greatest opportunity for its successful cultivation. This period must, if possible, be kept at its optimum point, and upon this theme we shall dwell with more or less detail.

FLOYD W. ROBISON.

NEW VALUABLE CROP.

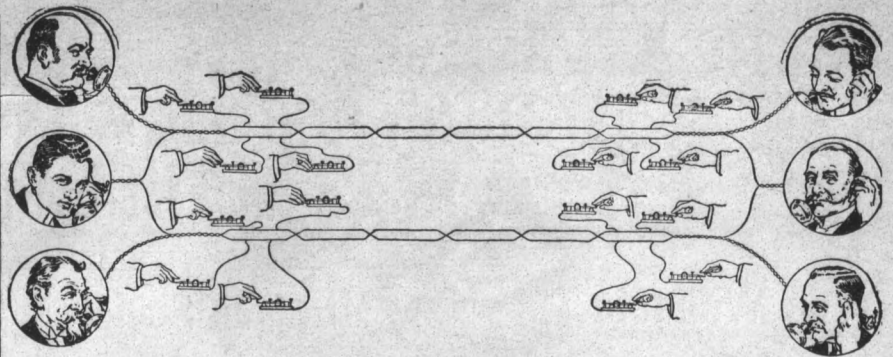
A few years ago one of the agricultural explorers of the Department of Agriculture, while in China discovered a plant which yields an oil that gives promise of furnishing a satisfactory substitute for linseed oil. The oil is pressed from the nut of a tree and is known as "wood oil," "tree oil," or "tong oil." It was used for a paint oil and had all the good qualities of linseed oil and some others.

Some of the seeds of this tree were imported by the Department and a few trees raised in the south for four years. The tree bears a heavy crop of nuts from which the oil is extracted. Experiments are now being made by the Department in perfecting a nutcracker to get the hard shells off the nuts, and a new form of press to get out the oil. While it may be several years before the tree can be grown to any extent in this country, the outlook for a new and valuable crop is encouraging.

How valuable this industry may be to this country may be appreciated when it is learned that on account of the destruction of flax plants by a fungus disease and the small area in which flax can be grown, the price of linseed oil has been advancing rapidly with consequent increased cost of the paint of which linseed oil is a part.

Washington, D. C.

G. E. M.



Double Tracking The Bell Highway

Two of the greatest factors in modern civilization—the telephone and telegraph—now work hand in hand. Heretofore each was a separate and distinct system and transmitted the spoken or written messages of the nation with no little degree of efficiency. Co-operation has greatly increased this efficiency.

The simple diagram above strikingly illustrates one of the mechanical advantages of co-operation. It shows that six persons can now talk over two pairs of wires at the same time that eight telegraph operators send eight telegrams over the same wires. With such joint use of equipment there is economy; without it, waste.

While there is this joint use of trunk line plant by both companies, the telephone and telegraph services are distinct and different. The telephone system furnishes

a circuit and lets you do your own talking. It furnishes a highway of communication. The telegraph company, on the other hand, receives your message and then transmits and delivers it without your further attention.

The telegraph excels in carrying the big load of correspondence between distant centers of population; the telephone connects individuals, so that men, women and children can carry on direct conversations.

Already the co-operation of the Western Union and the Bell Systems has resulted in better and more economical public service. Further improvements and economies are expected, until

time and distance are annihilated by the universal use of electrical transmission for written or personal communication.



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Universal Service



Story of a Shingle Nail

Thirty years ago a shingle nail—one of the M. I. F. Co. brand—was driven through a shingle that roofed a house located near the seashore. When the shingle was finally removed on account of old age the nail was found in a perfect state of preservation—free from rust—as sturdy and strong as the day it was hammered in.

That is the sort of test that proves nail quality.

M. I. F. CO. ZINC COATED NAILS

are cut from refined iron and heavily coated with pure zinc—not "galvanized" or washed with lead, but thickly COATED with zinc which protects them from rust.

From ten to twelve pounds of pure zinc is used in the manufacture of each hundredweight of M. I. F. Co. zinc coated Nails.

They cannot rust.

They are the very best nails for clapboarding, shingling, veranda flooring and all exposed woodwork.

If your hardware store isn't supplied, write us for your nearest dealer's name and our interesting book, "Nail Knowledge." It will be sent free.

Malleable Iron Fittings Co.

Dept. G, Branford, Conn.

Please mention the Michigan Farmer when you are writing to advertisers and you will do us a favor.

Woman and Her Needs At Home and Elsewhere

Who Will Join This New Michigan Society?

THAT American women are in the grip of "the great demon of discontent" has been said so often as to have become trite. We are all willing to admit the truth of the statement, and have shown a becoming curiosity when writers have attempted to diagnose the cause and give the cure.

For my part I believe that the discontent of women can always be traced to one of two causes, either they have too much to do or too little. Some way or other we are all extremists, we either do or we don't, and the women seem to be about equally divided between doers and don'ters. Those whose husbands can afford to keep them in idleness don't even exercise enough to keep them healthy, while those who have to work, overdo the matter in their useless effort to keep up with the ones who have more of this world's goods.

As it is idlers who are most frequently scolded, I propose to turn the target on the other sort and call to account the women who overdo. What's the use? What's the use of having a ten or twelve-room house to keep clean when your family really uses only four or five? You haven't time to sit in the parlor, and half the time the living-room only sees you when you go in there to dust. Two or three bedrooms are unused except on very rare occasions. What's the use of having them to keep clean, and rob you of a little more vitality?

What's the use of having a collection of bric-a-brac to dust? You buy it because you think it is pretty, or more likely because your neighbor has some and you just can't let her get ahead of you. But it only adds to your work. What's the use of having extra silverware and fine dishes set away on the shelves, to be brought out only on extreme state occasions, and at other times to be kept clean? If you want the pretty china and the silver, why don't you use it every day and throw away the plain or give it to the poor. It doesn't take any longer to wash Haviland china than it does iron stone, and what's the use of having it to put on the shelf? The only good it does you there is the joy you get out of knowing you have it.

Why have a lot of clothes you never wear, but must look over carefully for moths? What is the use of spending the time you ought to take in resting and getting acquainted with outdoors or with your neighbors in embroidering dollies and sofa cushion tops to be laid away in drawers and aired once yearly? What's the use of keeping baby in embroidery or lace trimmed white dresses, just because

useless work, but somehow we think we have to keep at it because the rest do. Down in a little town in southern California the women do differently and they are happier because they aren't always tired out. A six-room house down there is large, four is all the average family needs, a living-room, dining-room, kitchen and bedroom, or two bedrooms and the living-room and dining-room is enough. These rooms are plainly and comfortably furnished, but there is nothing around which isn't of use. Of course, they have pictures and books and music, but then, you will all agree those things are of the greatest use.

The plan of housekeeping is simple, the women do not have a general upheaval of cleaning every week, when everything is torn out of place. Every morning they do a little, but they rule that little. If something else seems more important the cleaning can wait. The meals are simple and the entertaining is simple. If a friend comes, the hostess does not think she must cook an elaborate meal and get out all her best linen and china. Friends are expected to take what is good enough for the family, and thus the hostess is not so worried and hurried that she hasn't any enjoyment out of the visit.

Everyone seems quite contented down there. They live, actually live, and that is more than the average housekeeper does back here. They take time to enjoy life and simple pleasures, while we work so hard that we can't enjoy a pleasure which isn't bought at the expense of three or four days of extra hard work.

Since I've seen how these women live I've determined to be the first member in a Michigan Society of Emancipated Housekeepers, members of which must pledge themselves to drop all unnecessary work and worry. I wish I might know that other tired women had gone into the order.

DEBORAH.

Women Who Are Doing Things. No. I.

Marion Harland.

MARION HARLAND, the dean of American women writers as well as the dowager empress of American housekeepers, is probably better known than any other woman in the country. That is why she was chosen as the first to be presented to the readers of these sketches, not because she needs

been writing so long that aspiring young writers sometimes think she might step and give them a chance. Suffice it to say that she can remember back 25 years before the Civil War, and that her first article was published when she was 14 years of age, and you can guess how many years her productions have been finding their way to the public. And even yet she is busy, furnishing a full newspaper page a week to a syndicate which sends her household lore broadcast over the country to the encouragement of struggling young housekeepers.

It is as a writer on housekeeping subjects that we know her best, but at first she wrote many stories, among her first



Marion Harland.

works being "Alone," the "Hidden Path" and "Kate Harper," a prize story for which she received \$50 back in 1853. Her first cook book was evolved out of her own discouragements, struggles and triumphs in her early days of keeping house, a fact which should encourage every bride who is weeping over muddy coffee and bad bread.

Mrs. Terhune was born near Richmond, Va., and spent her girlhood and young womanhood in the south. Later she came north, where she still resides. She was married in 1856 to Dr. Edward Payson Terhune, a Presbyterian minister, and is the mother of Christine Terhune Herriek, also a well-known writer.

Probably no woman has done so much good by her pen as Marion Harland. Others have written on social evils and brought about reforms, but Marion Harland has devoted her life to dignifying those homely tasks on which the welfare of the nation depends, but which, alas, so many other writers have led countless foolish women to consider degrading.

THE EVENING LAMP.

BY EMILY L. RUSSEL.

"Now stir the fire and close the shutters fast,
Wheel 'round the easy chair and light the lamp."

Yes, the lamp—and don't fret if you haven't gas, nor electric lights. Oculists say a good kerosene light is better for the eyes than either, especially the electric, which has too many red rays. The long winter evenings are the cosy home hours, the time for mental recreation and improvement as well as physical rest, and a bright light from a well-cared for lamp is the source of much comfort.

Burners and chimneys should be clean. The former, after being used some time may be made "as good as new" by boiling them in strong suds. One way of cleaning chimneys is to use a few drops of kerosene and then wipe with a soft flannel. If the end of the wick in the oil is fringed out about an inch the light will be stronger. When the wick is too large for the burner and does not move easily, instead of cutting down the side to make it smaller, draw two or three threads from the middle.

A shade that throws a stronger light on book or work, while it protects the

A HIT

What She Gained by Trying Again.

A failure at first makes us esteem final success.

A family in Minnesota that now enjoys Postum would never have known how good it is if the mother had been discouraged by the failure of her first attempt to prepare it. Her son tells the story:

"We had never used Postum till last spring when father brought home a package one evening just to try it. We had heard from our neighbors, and in fact everyone who used it, how well they liked it.

"Well, the next morning Mother brewed it about five minutes, just as she had been in the habit of doing with coffee without paying special attention to the directions printed on the package. It looked weak and didn't have a very promising color, but nevertheless father raised his cup with an air of expectancy. It certainly did give him a great surprise, but I'm afraid it wasn't a very pleasant one, for he put down his cup with a look of disgust.

"Mother wasn't discouraged, though, and next morning gave it another trial, letting it stand on the stove till boiling began and then letting it boil for fifteen or twenty minutes, and this time we were all so pleased with it that we have used it ever since.

"Father was a confirmed dyspeptic and a cup of coffee was to him like poison. So he never drinks it any more, but drinks Postum regularly. He isn't troubled with dyspepsia now and is actually growing fat, and I'm sure Postum is the cause of it. All the children are allowed to drink it and they are perfect pictures of health." Name given by Postum Co., Battle Creek, Mich.

Read the little book, "The Road to Wellville," in pkgs. "There's a reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



NULITE GASOLINE TABLE LAMP

A complete Light Plant weighing 7 lbs. Portable, absolutely safe, 300 C.P. brilliant light 1/2 cent per hour. Saves 90% of your light bill.

AGENTS Write for Special Offer on complete line of gasoline lights and systems. Over 200 different styles. Highest Quality. Lowest prices. Exclusive territory for capable town, county and traveling salesmen. 72-page illustrated catalog free. Write to-day.

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Let us show you free of all cost or obligation exactly how you can save money on everything you buy to eat or wear or use in any way.

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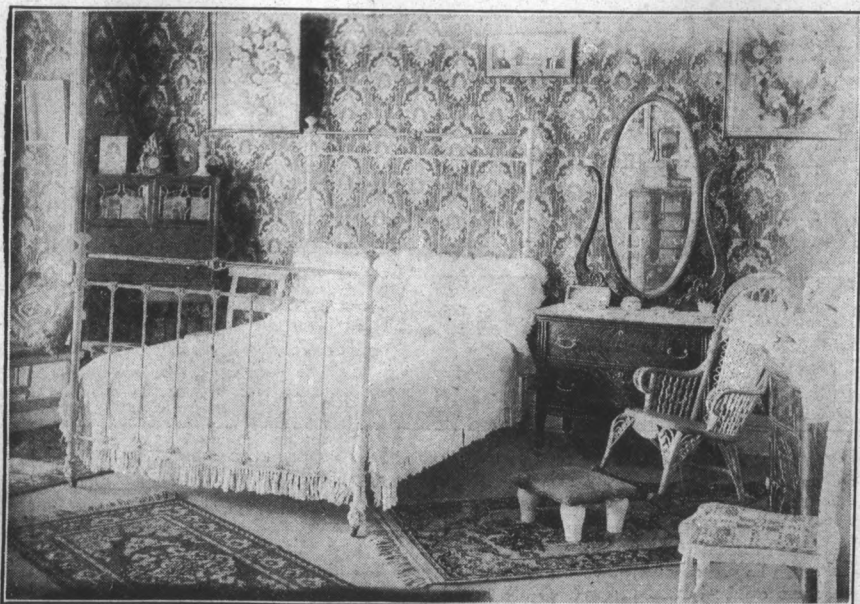
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One of the Guest Rooms in the Farm Home of E. H. Wilder, Lenawee County.

he looks pretty, when the poor little chap would be lots happier in a blue romper rolling in the dirt? And you would be happier, too, for you would not be worried for fear he might get dirty.

I have long thought we women would be happier if we could drop a lot of our

Mary Virginia (Hawes) Terhune, as the biographers call our Marion Harland, has

eyes from the direct rays, should always be used, also on a lamp used on the dining-table.

Kerosene is also useful in removing besides giving light or heat. It economizes "elbow grease" on wash day, and is the silver lining of the housecleaning cloud. It easily removes spots and dirt from furniture, woodwork and hardwood floors; also, from sinks, bathtubs, zinc and tin buckets. Used in combination with ammonia it makes one of the best window cleansers. Mixed to paste with wood ashes it will remove rust from iron and steel if left on a few hours; or use a paste of equal parts of whiting and brick dust mixed together with kerosene.

Kerosene is valuable in many ways. Stains. Ink on muslin or linen may be rubbed with soap then covered with water to which kerosene has been added and boiled. Ink stains on the fingers may be removed by dipping them in kerosene and rubbing with pumice. For blood stains, saturate well with the oil and let remain awhile before washing; grass stains, and also paint, if fresh, may be removed by the use of it. It is good to remove spots in a general way from woolen fabrics. Apply plentifully with a cloth and rub well, then hang the article in the air until the oil has evaporated.

If the clock needs oiling it may be done temporarily by saturating a piece of flannel in kerosene and placing inside the clock, where the vapors from the oil will lubricate the works.

Ants may be driven away from lawns by filling a long-spouted machine oil can with kerosene, into which red pepper has been stirred. Thrust the nozzle as far as possible into the ant holes. It is sure death to these pests.

It is also valuable for cuts or bruises, and nothing is better for man or beast when stepping on a rusty nail, than kerosene and common soda made into a poultice. This should be changed every 15 minutes or half hour as long as necessary.

STORMY DAY OCCUPATIONS.

BY GENEVA M. SEWELL.

Every mother should keep in reserve a box or set of boxes, in which to put a variety of articles as they come to hand, to be used on stormy days only. One box may hold pieces of cloth with thread, needles and patterns for making the dolls some special holiday or vacation garments; another may hold cigar boxes, sandpaper, stencils, brushes and paints; another may hold different colored paper, with patterns of things to make by folding, cutting and pasting the paper; another, all the advertising and magazine pictures with which every periodical is filled, some paints or colored pencils, different colored pieces of ingrain wall paper, paste tubes, different colors of raffia, a ruler, scissors and some patterns which may be copied for border work. Show the child how to make a booklet out of the wall paper, but cutting seven pieces thirteen and one-half by ten inches, fold this in the middle the long way and you will have a piece six and one-fourth by ten inches in size. The seven large sheets will give, when doubled, fourteen pages, but the two on the outside are used for covers and may be made of a different color from the others. Fasten all the leaves of the booklet together at the folded edge by lacing up over and over with the raffia. Use the paint for lettering the booklet and it may be called "My Vacation." This is lettered on the front outside cover, and a pretty border may be put around the whole page if you wish, for it will keep the child pleasantly occupied on a bad day.

At the top of each inside page the headings may be lettered and a border run around the edges, then the pasting may be begun.

The heading for page one may be called "My Portrait;" for page two, "How I Traveled;" page three, "The Location;" page four, "The House;" page five, "New Acquaintances;" page six, "Favorite Recreations;" page seven, "Snap Shots;" page eight, "An Exciting Occurrence;" page nine, "A Laughable Occurrence;" page ten, "Evening Amusement;" page eleven, "Farewell Party;" page twelve, "The End."

After the booklet is made this far all there is to do is to paste in appropriate pictures cut from the periodicals at hand. The "Portrait" may be of a person or an animal. Take, for instance, the beaver or the wolf, what a history of their life and habits the child can learn just from using the correct pictures. If a person is selected one could take a Japanese, an East Indian, or any of the peoples of the old world or South America, and the

children would gather a wonderful lot of knowledge just from filling out this simple outline. Other things may be added, as "What I eat," "What I wear," "How I go to church," etc. In fact, there is almost no limit to the headings that may be used and a child will glean in this pleasant way on stormy days a very useful stock of information.

If history or geography is a stumbling block to the child try having them make a booklet and use the things that bother them for headings. In looking through the magazines to find pictures to represent the things wished, the difficult lesson will be quickly learned.

This game may also be used in the composition work which so many children dread. The child may give a description of the one in the portrait, and describe the house, and tell of the adventures. By the time they are through to the end of the booklet they will have a very readable composition.

Insist that this is stormy day work only and the stormy day will cease to be a "bug-bear" to both children and mother.

"HOW SHALL I TELL MY CHILD?"

How to answer the all-important question, "Whence Am I?" when it is propounded by the little ones, is told in Mrs. Wood Allen Chapman's booklet, "How Shall I Tell My Child." Mrs. Chapman is widely known as a lecturer and writer and her advice is practical. Mothers who wish to answer their children truthfully and wisely would do well to see how one mother solved the problem. The book is published by the Mary Wood Allen Fund Committee of New York.

SHORT CUTS TO HOUSEKEEPING.

Try washing new stockings before being worn, to save darning. They will wear much longer.—Miss D. B.

Use ammonia for bee stings or insect bites.—E. M. C.

A tablespoonful of household ammonia to one quart of soft water is excellent in cleaning woodwork.—L. M. L.

If the outer edge of the stamped scallops you wish to embroider is stitched on the machine, they will not ravel when laundered.—W. M.

MICHIGAN FARMER PATTERNS.

These patterns may be obtained from the Michigan Farmer office at the price named. Be sure to give pattern numbers and size.



No. 5509, Ladies' Coat Gored to Shoulders at Front and Back. Cut in 6 sizes, 32 to 42 inches bust measure. Size 36 requires 2 3/4 yards of 50-inch material. Price, 10 cents.

No. 5562, Ladies' Waist with Applied Yoke. Cut in 6 sizes, 32 to 42 inches bust measure. Size 36 requires 2 yards of 36-inch material, 1/4 yard of 18-inch all-over. Price, 10 cents.

No. 5560, Children's Bishop Dress. Cut in sizes 1/2 to 1, 3 and 5 years. Age 3 requires 3 yards of 27-inch material, 7 yards of insertion, 1 yard of edging and 1 yard of ribbon. Price, 10 cents.

No. 5540, Ladies' Coat Sleeves, cut in 3 sizes, small, medium and large. The medium size requires for either sleeve 3/4 yard of 50-inch material. Price, 10 cents.

No. 5550, Children's One-Piece Kimono. Cut in sizes 2, 4, 6, 8, 10 and 12 years. Age 8 requires 4 1/4 yards of 36-inch material, with 3/4 yard of 27-inch contrasting goods. Price, 10 cents.

You Who Get Hungry Between Meals

Don't deny yourself food till meal time.

When that midmorning hunger approaches, satisfy it with Uneeda Biscuit. These biscuit are little nuggets of nutrition. Each crisp soda cracker contains energy for thirty minutes more work.

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HOME AND YOUTH

THE COUNTY FAIR.

BY LALIA MITCHELL.

Cattle and horses and sheep and swine,
And oxen and ponies and foals in line,
Turkeys and pigeons and ducks and hens,
And bantams and pullets and geese in pens.

Fruit from the orchard, grain from the mill,
And garden truck from the plain and the hill;

With pies and puddings and cookies, too,
And home-made wines of an ancient brew.

And fancy cushions of print and silk,
Paintings and china and all such ilk.
Oh, wonderful, wonderful things are there,
On the opening day of the county fair.

Women and children and youths and maids,
From stony hillside and village glades,
Grandsires wrinkled and bent and gray,
And schoolboys, out for a holiday.

The village judge, with his gloves of brown,
His genial smile and his legal frown;
And the village fool, with a song and jest,

Bound to be happy like all the rest;
A dainty bride in her gown of white,
And politicians, each one polite
With an eye on a future office chair,
And the voters, seen at the county fair.

Horses that cavort and toss their heads,
And nags with ringboned spavined legs,
Autos that snort and wheeze and puff,
And drivers genial and drivers gruff.

Weary women, who vigil keep
O'er dragged out children gone fast asleep,
And a line of carriages homeward turned,
The "speeler's" plea and the side tent spurned.

A sinking sun and a dusty road,
But happy hearts in each shouting load.
For nothing will ever quite compare
With the long day spent at the county fair.

THE FOX HUNT.

BY WALTER SCOTT HASKELL.

A large silver-grey fox, whose skin was worth fifty dollars in the market to anybody who could take it, stood on a little ridge overlooking the lower levels and surveyed the scene below. Sounds came up the valley that warned Mr. Fox to be on the move, but in spite of the ominous bay of the hounds the animal took his time for a little breathing spell, and even sat on his haunches and rested on the snow-covered ground.

Presently the silver-grey turned about and began retracing his own trail, stepping carefully in the tracks that he had made. After covering about a quarter of a mile, and being that much nearer the dogs, the fox came to a log that he had passed in coming up the incline, and, with a little spring he hopped upon the log, which ran at right angles with the trail, leaving no tracks in the intervening space. The wind had blown the light snow from the top of the log, and Reynard's feet left no visible trail as he walked to the end of it and disappeared in a thicket of alders.

The hounds came up the trail a few minutes later and, seeing the tracks continuous, they passed the log without giving it particular attention. When they reached the top of the hill, however, and found that the trail ended there, they began to howl in dismay, knowing full well that Mr. Reynard had played them a trick by "doubling" on his trail. With the instinct of trained animals the hounds began a series of circles, intent on picking up the lost trail.

A half mile in the rear of the hounds two men and a boy were making their way on snowshoes. Each carried a gun and all were alert for signs of Reynard. It had been a hard chase, and the humans were tired with their long tramp through the snow.

"What's the matter with the hounds, pa?" asked the boy as his quick ear detected a change in their manner of baying, and he saw them running hither and thither with their noses to the ground.

"Guess the fox has 'doubled'," answered the tall man who fingered his long-barreled rifle nervously as though his index finger itched to pull the trigger on the quarry.

"What do you mean by 'doubling'?" asked the short dapper man who wore city clothes and handled his gun gingerly.

"I mean that the fox has retraced his steps for a ways, to fool the hounds. It's only one of their many tricks, and they're the slickest critters that ever stole a chicken or robbed a hen's nest," explained the man whom we will introduce as Mr. Juber Jones, fox hunter and trapper in northern Maine.

The boy was Allen Jones, the son of

the hunter, and the young man was Horace Berkeley from Boston. The latter gentleman was not a born hunter, but merely a city man out for recreation during a winter of leisure.

"I guess we're wastin' time here, trudin' after them hounds," mused Juber Jones in his slightly nasal accent common to some of the early stock of New Englanders.

"I'd like to get a fox before we quit," objected the Bostonian.

"Who's talkin' about quittin'? I said we're wastin' time here. There's other places to go where we're more likely to strike somethin' real lively," retorted Juber, looking off to the west.

"All right, anywhere you say?" agreed the other as he bent to dig the accumulated snow from his Indian snowshoes and make them less weighty.

"Ye see that blasted pine over there? Wa'al, that's a favorite spot with the foxes. I've shot many a one over there. Shouldn't wonder if the fox that the hounds are after would circle around and come that way."

"Will the hounds find the trail again after the fox 'doubling'?" asked Horace.

"You bet yer life they'll find the trail!" vociferated Juber with some spirit, for he was proud of his dogs, and could not bear any reflection on their capabilities.

"Oh, look, pa! There's a fox running across the hillside. See?" exclaimed Allen bringing his gun in position to shoot.

"Hold on, lad, don't waste your ammunition at this distance. It's too far to shoot a fox on the run. Ye can't hit him. There, he's stopped, now try him. Rest yer gun over the stump, screw up yer hind sights to 40 rods and then let 'er go. Quick, 'fore he moves," directed the old fox hunter as he watched with keen interest his young son's initial efforts at bagging the fur-bearing animal at long range.

Allen did as his father told him, and, resting his gun on a convenient stump, squinted along the barrel. When the fox's body showed in the globe sight he pulled the trigger and the rifle spoke.

There was a moment of uncertainty, and the animal was seen to be jumping around in his tracks, without getting ahead.

"I've hit him, pa!" cried Allen excitedly as he started to run toward the apparently wounded fox.

The boy reached the animal before his companions, and found the fox keeled over in a little tangle of vines at the foot of an uprooted tree. Allen pulled out his quarry by the hind legs, after extricating one of the forelegs which had been caught in the vines in such a way that it held fast and had to be cut with a knife; that is, the vines were cut to liberate the leg.

"Ain't he a beauty, pa?" said Allen, admiringly holding up the animal for his father's inspection.

"Pretty fair pelt for the season, but I'm surprised that ye hit him at all," commented the elder Jones. "Did ye find where the bullet went?"

"No, pa, I don't see any marks."

"Well, le's not bother now, but get over to the stunted pine as quick as we can. I hear the hounds baying over by the lake, an' they'll purty likely drive the fox round near the pine. Come on, all of ye."

Saying which, the hunter swung his broad snowshoes and headed for the lone pine.

"Pa, this fox is heavy, an' I can't carry him with the gun," complained Allen wearily.

"Wa'll give'm to me. I'll carry 'im," said the elder, stopping to take the burden from his tired son.

Juber hurriedly took a string from his pocket and tied one end around a hind leg and the other to a fore leg. Then he slung the animal over his shoulder, and could thus carry the weight without impeding his progress or interfering with the free use of his hands in handling his rifle.

As they proceeded, the sound of the baying hounds grew louder, and it was evident that the fox had swung around and was making for the lake not far from where he started. In half an hour they reached the blasted pine, which was on the shore of the lake and commanded a view of the surrounding country. Across the lake, which was frozen, they saw on the opposite bank a scene that was both picturesque and interesting, from a hunter's standpoint. A beautiful silver-grey fox was leaping through the snow, and close behind him, less than a dozen yards, were the hounds in full chase. It was evident that the fox was utterly exhausted with running, and his leaps

were staggering and ineffectual. The dogs were tired also, but they had strength to finish the chase, evidently. Their tongues were lolling, and they uttered their doleful cry, that sounded like "h-o-u-n-d! h-o-u-n-d! h-o-u-n-d!"

"By hokey! ain't that a purty sight?" vociferated Juber as he viewed his splendid dogs closing in on the fox.

To the city man it had all the appearance of a real tragedy. He found his sympathy going with the hunted fox, and secretly wished that the animal could escape. But no, the dogs were gaining, and the space between them lessened to five yards, then three and then two.

Suddenly the fox wheeled in his tracks and faced the brutes that menaced him. For one short minute he stood his ground, a noble specimen of the genus fox. He fought against odds, and he fought well. It was the fight of desperation, and more than one hound felt Reynard's teeth close on his flesh. But the odds were against him and he grew weaker and weaker as the dogs snapped and bit from all sides. Then the finale came, the fight was over, and Reynard had lost his life.

The hunters started across the frozen lake to intercept the hounds and secure the fox before injury was done to the fur by the excited animals. When about half way across Juber stumbled on a protruding piece of ice or hummock and fell sprawling.

"Did you hurt you, pa?" asked Allen, anxiously, as he viewed his parent in the undignified position.

Just then something with fur on it darted out from the heap on the ice. It was the red fox come to life.

They could scarcely believe their eyes. But there he was, the fox Juber had been carrying for dead, now as lively as any they had ever seen. The animal was leaping to get away, but at every other jump the string tied to his legs tripped him up, and he would go rolling head over heels.

"Catch the critter!" cried Juber, scrambling to his feet and rubbing his shins where the ice had struck him.

The Bostonian, being nearest, made a dive for the runaway, but he, too, met with a mishap. The awkward snowshoes caught and he went headlong. It so happened that the fox had turned and attempted to dive between the legs of its pursuer, but instead got under the falling Bostonian and received the full weight of the man. Something snapped, and the fox lay dead with a broken spinal column.

"Wa'll, I declare! That is one way to catch foxes, to fall on 'em an' break their necks," commented Juber laughing heartily at the incident.

"What made him come to life, pa?" asked Allen who was yet mystified over the occurrence.

"Why, that fox never was dead before Horace fell on him. Ye see it's a trick of them cunning critters to play dead like a possum when they're cornered. I calculate that the critter got his foot tangled in the brush and vines, an' couldn't get away. I don't think your bullet touched him. When ye came up, an' the fox see that he was cornered, he just naturally played his dead trick an' waited for a chance to get away. There didn't no chance come until I slipped on the ice and threw him off my shoulders; then didn't he run as fast as he could, until Boston fell on him. Haw! haw! haw!"

Juber laughed until the tears came into his eyes.

"Is that a common trick of foxes to play dead?" asked Horace, who was interested to know.

"Wa'al, no, not common, but they do do it. I've had 'em play it on me afore. And other animals will play dead when they get cornered. It's just animal cunning an' comes natural to 'em."

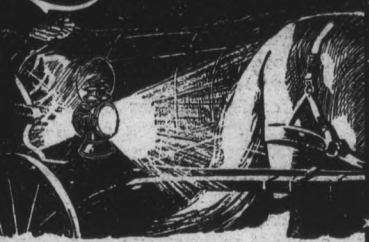
When the hunters reached the hounds across the lake they secured the silver-grey. While taking off the pelts to save carrying the carcasses Juber made a discovery. He discovered that the fox the hounds had run down was the female, and not the male as he had supposed. He had seen the dogs start the fox, and was near enough to pronounce it a male fox from general appearance. But here at the close of the run was a dead female. What did it mean?

"Them foxes has been running in re-lays," quoth Juber for explanation.

"What do you mean, pa?" asked Allen.

"Why, ye ain't no hunter's son if ye don't know, as many times as I've told ye. When a fox gets tired from running away from the hounds, he'll commence playing tricks to fool the dogs. First, he'll 'double', then he'll play dead—but that's the

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last thing. There's another trick that's a favorite with 'em. It's to run in relays. Take, for example, our dogs chasing the male fox. The fox got tired and circled around to his kennel—meaning his hole in the ground—where the female is waiting to relieve him. She jumps into the trail and he goes into his hole and rests and sleeps while his partner leads the dogs. Now the best hounds in creation couldn't stand to run a fresh fox every two or four hours. I've seen hounds so discouraged with running foxes in relays that they were half sick, and wouldn't go on the trail for days. They would come home lookin' very meek, feelin' that they were outwitted by a fox. Wa'al, I reckon that if we go back on the trail a ways we'll find the other fox sittin' in his den waitin' for his mate to come home."

And this proved to be the case. After securing the third fox the hunters hungry, but well paid for their labor, for the fur of the silver-grey is valuable, and growing more so every year as the animals become less numerous from being hunted so strenuously.

MAKING OLD MAGAZINES USEFUL.

BY MARY ROLOFSON.

What are you going to do with your old magazines? There are many uses for old newspapers, but not so many for old magazines. Then, too, they are too good to be inconsiderately handled. It always goes against my conscience to spoil a choice magazine.

You can make scrap-books of them? Yes, if you have an unlimited amount of time at your disposal. It takes lots of time to select, cut, arrange and paste the clippings, I fancy the average family does well if its members take a few minutes to read the magazines when they come. That, I hope, all can do, for they are pretty sure to get out of touch with the rest of the world if they do not. But to go over them again and cut them up, after they have been read, is too much to expect. The magazines can be loaned until they are worn out. That gives them the opportunity of doing all the good they can. The only question about this is the method of doing it. To my mind the ideal way is to have a reading room. In every town there is some place that could be used for this purpose. In the country, churches, schoolhouses and Grange halls could be made to answer the purpose, the periodicals being collected here and loaned to readers after the system of the circulating library. If those who take magazines could read them promptly and bring their copies to such a reading room while they are still fresh in appearance and recent enough to be interesting, what a world of good might be accomplished!

Then, after the magazines have done their duty at the reading room they could be passed on to shut-ins. For the shut-in to pore them over and cut them into scrap-book pieces would be a very different thing from an active, busy person doing it. Not all invalids would care to do this, I know, but those to whom it would be a pleasure could be found, and these should preside over the final destinies of the magazines. Scrap-books of recipes, of travel and biography, of helpful poems, of children's pieces to speak, of humor and of pictures would arise from the ashes, so to speak, of these perished volumes, and they would still be useful for a long time to come.

THE "KNOCKER."

BY MILLIE GRISWOLD REILEY.

Do you look upon your neighbor
With your eyes all full of scorn,
Just expecting something awful
From the night till early morn?

Do you always watch your chickens,
And your melon patch as well,
Thinking someone might surprise you
If you closed your eyes a spell?

Do you believe in high board fencing,
To prevent a prying eye;
Do you kick about the climate;
Are the taxes all too high?

Do you fail to see the profit
To be gained by improved roads;
Do you hate to turn out always
Meeting men with heavy loads?

Though you always are so grouchy,
Though you always feel so blue,
Not your family or your neighbor
Is the ugly one—it's you.

Just prepare for something hotter,
Or cool down, it's not too late,
Even though it borders chronic,
Learn to love all those you hate.

Do brace up and be a "boomer"—
Not a "knocker" as of yore—
And the world will use you better
Than it ever did before.

GRANGE

Our Motto—"The Farmer is of more consequence than the farm, and should be first improved."

PURPOSEFUL GRANGE WORK.

I want to say a word to the lecturers and patrons, generally, who read the Michigan Farmer, upon the value of having a purpose in our work. We are all agreed that the Grange is a great educational institution. We speak of it thus broadly very often and, without doubt, we mean what we say, but all the while we are suffering personal loss because we have not used the Grange to do definite things for us.

We should employ the lecturer's hour as a means to definite ends. We are taught to include the house and the home as well as the farm and the field, and this is quite proper, but often the lecturer aims at so many things at once that nothing is hit very hard. I am going to ask your indulgence and name a few things, in particular, which any ordinary Grange might profitably do in the lecturer's hour.

The consideration of our trade contracts is of much importance. Few, indeed, of the hundreds of Granges in the state are as conversant with these matters as they should be. The value of the individual contract is a question of importance. Are the goods what we want? Are terms and prices right? If so, let us push the matter in our Grange and reap the possible benefits.

Then there is the matter of degree work. Just what is its value to the Grange? How can we make it most effective? Shall the regular officers do the work or shall we have a degree team?

There are things of great moment to us as farmers which may be profitably discussed. The San Jose scale is attacking orchards throughout the larger part of the lower peninsula. How many of us know this kind of scale from the other sorts when we see it? It is important that we should know it, for when once it is established in the orchard it will kill the trees if it is not checked. Every one can easily learn to distinguish it and I know of no other place so good as the Grange in which to acquire the information. Take specimens of the scale on fruit and branches to the Grange and study them until every member cannot only distinguish this scale from other forms but has learned the most successful way to fight against it.

What is true in this particular is equally true in relation to every other obstacle in the way of fruit culture. The codling moth and the apple scab, curculio and shot-hole fungus on the plum and cherry, can all be successfully controlled if proper methods are employed, and everybody can learn how to do it. The Grange is the best place to acquire this knowledge. We should bring specimens of all these troubles of ours right into the Grange hall, exhibit them to the Grange members while we are talking about them, and thus bring the aid of the eye to the ear in conveying these facts to the mind. Too much cannot be said in favor of demonstration work.

"What the eye sees makes a more lasting impression." I have just received one of Bro. Geo. B. Horton's excellent programs in which he has assigned the subject of treating seed wheat for smut to one of the members. The thought comes to me that a single meeting of the Grange in which this subject should be properly handled might be worth hundreds of dollars to the community. As farmers, we should not be ignorant of these things, and we need not be if we will make our Grange a school in agriculture. But our purpose or ideal may be broader and thus include many things not mentioned here. The important matter is, however, to be thorough in what we do and thus move ever "onward and upward" to higher ground.

W. F. TAYLOR.

1911 MEETING OF WASHINGTON STATE GRANGE.

Washington State Grange held its 23d session at Snohomish June 6-9; 256 delegates represented the 15,253 members in the state, who are distributed in 302 Granges in 30 counties. This is a gain of 2,202 members during the year. Seventy-one new Grangers were added during the year. There are 26 Pomona Granges, seven having been organized during the past year. One county, which did not have a Grange a year ago, now has 21 and 1,063 members.

The State Grange decided to unite efforts with the Federation of Labor, Farm-

ers' Union and other organizations favoring direct legislation in order to further the movement for adoption of this reform in Washington; also for state-farmers of Oregon secured direct legislative prohibition. It was thus that the ing, domestic science and agriculture be lation.

The Grange urged that manual training so that they will be more readily accessible than now. The consolidation of rural added to the school courses as fast as practicable, and that short courses be established in a few parts of the state al schools was also favored. The attitude of the progressive Grange states and of State Master Kegley at the National Grange at Atlantic City last November was endorsed, and prompt reformation of disadvantageous conditions in the National Grange was urged.

C. B. Kegley, the ardent champion of proportional representation in the National Grange, was re-elected master by a vote of 226 to 20, which indicates strong endorsement of his past administrations. Secretary Fred W. Lewis of Tumwater, and Lecturer C. W. Frase of Alpha, were also re-elected.

The year's receipts were \$10,665.57, expenses being \$9,881.86. The treasury balance June 1 was \$2,578.67; \$1,990.50 was spent in organizing and \$1,292.56 in field work during the year, which resulted in the 71 new Granges mentioned above at an average cost of about \$46 per Grange and 10 cents per new member.

Fuyallup was selected as the place for holding next year's State Grange meeting.

Maple Grove Picnic.—The members of Maple Grove Grange, of Charlevoix Co., held their fourth annual picnic on their beautiful picnic grounds in Hayes township. As in past years, it was a success in every way. An immense crowd was present, coming from all parts of the county. The program was carried out in full, the principal address being made by State Master Hull. Mr. Hull, who is very popular in this county, took for his subject the problem of the proper distribution of the products of the farms, showing that the farmer received the small end of the profits, and the power of organization to secure a more equal distribution. In closing, Mr. Hull voiced his well known opposition to Canadian reciprocity which seemed to meet with the approval of his audience. The athletic sports were hotly contested and altogether it was a day of pleasure and profit well spent.

COMING EVENTS.

Pomona Meetings.

Ingham Co., with Ingham Grange, at Dansville, Friday, Sept. 22, 1911.

Kent Co., with Carlisle Grange, Wednesday, Oct. 4. Master N. P. Hull, state speaker.

Lenawee Co., with Palmyra Grange, Thursday, Oct. 5.

Wayne Co., with Belleville Grange, Friday, Oct. 13. F. F. Ingram, speaker.

FARMERS' CLUBS

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

OBSERVE MEMORY DAY.

With the approach of September 30, every reader of the Michigan Farmer, and particularly every member of a Farmers' Club, should be mindful of the significance of Memory Day, and of his duty in connection therewith. To Ex-Associational President Daniels, we are indebted for the idea of Memory Day, and to his persistent effort is due the fact that the day has not only been officially recognized by the Farmers' Clubs and the State Grange, but by the legislature as well. September 30 has thus been set apart as a Memory Day, a day for general observance in caring for and decorating the graves of departed friends, and putting rural cemeteries in some semblance of order and care. What one of us can afford to let this opportunity go by to perform a grateful service of this nature, which all should consider as a duty incumbent upon them. As the graves of our soldier dead are decorated with flowers on Memorial Day, so let the graves of our own kin be decorated and cared for on Memory Day.

We are indebted to Ex-President Daniels, not alone for the idea and realization of Memory Day, but as well for the expression of the hallowed sentiment to which the thought gave birth, in the beautiful poem from the pen of Michigan's illustrious poet, which was published in these columns last year and which we hope every Club member preserved. Also the Memory Day hymn, which was presented through this department, and which will be again published for the convenience of our readers, was given to the cause of Memory Day through Mr. Daniels' munificence.

So, whether or not the local Farmers' Club, of which the reader may be a member has taken steps to observe Memory Day as an organization, we hope and trust that the readers of this department will one and all resolve to observe the day in an appropriate manner. The sentiment of the occasion is ennobling and the effort expended in its observance will be a gratifying memory throughout the year. Yes! By all means observe Memory Day.

CLUB DISCUSSIONS.

Beautifying the Farm.—The Washington Center Farmers' Club met at Echo Glen, the pleasant home of Mrs. Dancy Whitman, Sept. 14, at 1:30 p. m. The meeting was called to order by President Cook, followed by singing "Greeting Glee." The first question on the program was, "Does it pay to beautify the farm?" Mrs. Ida Cammet was called on to lead the question. She thought it paid very well to keep things picked up, keep the lawn mowed and various other things done in beautifying the farm, as it would sell better and you would enjoy your home more. Mr. Cammet also gave some very good hints on beautifying the farm.

What the Farmers' Club Owes to the Women.—This subject was led by Frank Cammet. He said the Club owes its very existence to the women, in the good dinners, making the programs, the women are the mainstay. Mrs. Whitman thought if it were not for the lady members the summer meetings would be out of existence. This question caused much merriment. Singing America was the next on the program. Then came the question box.

The Question Box.—Who is the Farmers' Club for? Mrs. Cook thought it was beneficial to both men and women, as they received many different ideas on different things. Others expressed their ideas as to who the Club was for. Would it pay a young man to buy or rent a farm, providing he had \$1,000 to pay down, the way land is selling today? This question brought out a lively discussion by Messrs. Cook, Morse and others. This concluded the program. The afternoon was very stormy, but there were a good number present and all had a delightful time. As Mrs. Whitman has sold her farm, the Club regrets her removal from them as she was always ready and willing to help make the meetings a success. She treated the Club to some fine melons. The next meeting will be the annual Club Fair, which will be with Mr. and Mrs. C. N. Curren on Thursday, Oct. 12, 1911. The ladies will serve a chicken-pie dinner. Everyone is requested to bring something for an exhibit to make the fair a grand success.

Discuss Club Fair.—About 50 members and friends of the Rives and East Tompkins Farmers' Club met at the home of Mr. and Mrs. Col. True, Sept. 2. The Club was opened by singing America, followed by a prayer by the chaplain. The fair was discussed and it was decided to leave it until next meeting. An excellent program was rendered. After the question box, containing many amusing and interesting questions, the Club adjourned to meet with Mr. and Mrs. C. Kilgallin, Oct. 7.—Ina Stringham, Cor. Sec.

Rural Entertainment.—The Maple River Farmers' Club met August 24 at the home of Mr. and Mrs. Wm. Vandekarr. Mrs. C. B. Cook discussed the subject, "Rural entertainment, how best promoted." Mrs. Cook said that they had a lawn tennis court which just now was enjoying a season of popularity second only to their fine watermelon patch. All kinds of healthful entertainment should be encouraged in the country as elsewhere.

Crop Notes and Prospects.—William Gladden considers this just about an average season. Wheat was very spotted but good in Michigan. Hay was a short crop all over—15,000,000 tons short for the country. Beans are uncertain. Corn fair, potatoes "40 for meal" of early ones. Late potatoes may be better.

Education vs. Observation was the subject of a talk by Mr. C. B. Cook, who said that education should be continuous from birth until death. A good observer not only sees things but sees things rightly and is able to make valuable deductions from what he sees. Close application and careful observation will lead to success in almost any undertaking. All of the above questions were very interestingly discussed by members of the Club and visitors. Music of a very enjoyable character was rendered. Mrs. John Bilhimer, our newly elected president, and the first woman president that this Club has ever had, presided with neatness and dispatch. The September Club will meet with Mr. and Mrs. Theoren Gladden on Thursday, Sept. 26, at 10:30 a. m.

The Wheat Crop.—The Deerfield Farmers' Club met at the pleasant home of Albert Cameron. The meeting was called to order by President Fred Hall, and was opened by singing America, the Lord's Prayer was repeated by the Club. After a good literary and musical program had been rendered the following questions were asked and thoroughly discussed: "What time in September would you sow wheat?" Discussed by Mr. Eaton and Mr. Killen. "Is it advisable to sow fertilizer on wheat?" Discussed by Albert Cameron and Fred Hall. "Which is the better way to can corn?" Answered by Mrs. Henry Faucett and Mrs. Charles Divney. "What makes butter prices so high and will it continue?" Discussed by the gentlemen present. Meeting then adjourned for supper and will meet with Mr. James Sharp the fourth Saturday in September.

MARKETS

DETROIT WHOLESALE MARKET.

September 20, 1911.

Grains and Seeds.

Wheat.—Everybody dealing in wheat is watching the progress of elections in Canada with more acuteness than the conditions that normally govern the making of prices, and the market will not find itself recovered from the nervousness engendered by the proposed raising of the tariff wall on grains until after it has been determined whether or not the Canadians wish to accept the trade pact. Prices for the week average lower than for the previous week. Labor trouble in Spain and Austria has stiffened quotations abroad and the unsettled relations between France and Germany are also wielding a bullish influence. Weather on this side has favored the reduction of values, but farmers have not responded with offerings. They figure that if the trade pact goes through that there will be no change from present conditions, but if it does not then conditions point to an advance in price, and if there is any advance they would like a portion of it at least. One year ago the price for No. 2 red wheat was \$1 per bushel. Quotations for the past week are:

	No. 2	No. 1	Red.	White.	Dec.	May.
Thursday	90½	87½	97			\$1.01½
Friday	89¾	86¾	96¼			1.01
Saturday	89¾	86¾	96			1.00¾
Monday	89¾	86¾	96¼			1.01
Tuesday	90	87	96½			1.01½

Corn.—High prices have put a sort of damper on the corn deal and discouraged foreign selling to some extent during the past few days; however, on Tuesday a little decline in prices brought forth activity from old and new sources and again set the factors of the trade in motion and prevented any slump so that the week has seen further substantial advances in values. A year ago the price paid for No. 3 corn was 56½¢ per bu., which is 12¢ below present figures. Quotations are as follows:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	68½	69½
Friday	69	70
Saturday	69	70
Monday	69	70
Tuesday	68½	69½

Oats.—The closing figure of a week ago has been the high figure of this week from which fractional declines resulted. In Chicago Tuesday there was an advance brought about by longs who had over-sold in an effort to take profits and in replenishing their supplies lent support to a higher market. There is a fair cash demand. A year ago the price for standard oats was 37¢ per bu. Quotations for the week are:

	Standard	No. 3
		White.
Thursday	46	45½
Friday	45¾	45¼
Saturday	45¾	45
Monday	45¾	45
Tuesday	45½	45

Beans.—In some sections of the state good weather has prevailed for gathering beans, while in other parts the crop has suffered for lack of sunshine. Prices for futures have improved. Quotations are as follows:

	Prompt.	Oct.
Thursday	\$2.15	\$2.10
Friday	2.17	2.12
Saturday	2.15	2.12
Monday	2.15	2.12
Tuesday	2.15	2.12

Clover Seed.—The average values are a little below those of a week ago for common seed and steady for alsike. There is not much seed moving because fields are not yielding heavily and the number of acres is small. Quotations are as follows:

	Oct.	Alsike.
Thursday	\$11.75	\$10.50
Friday	11.75	10.50
Saturday	11.75	10.50
Monday	11.75	10.50
Tuesday	11.75	10.50

Rye.—This market is higher and dull, with cash No. 2 quoted at 90¢, which is a 1¢ advance over the figures of last week.

Flour, Feed, Potatoes, Etc.

Flour.—Market is quiet and easy with values steady. Quotations are:

Clear	\$3.90
Straight	4.15
Patent Michigan	4.60
Ordinary Patent	4.40

Feed.—All kinds of feed are steady. Carlot prices on track are: Bran, \$26 per ton; coarse middlings, \$27; fine middlings, \$30; cracked corn, \$26; coarse corn meal, \$26; corn and oat chop, \$26 per ton.

Hay and Straw.—Market has sustained last week's advanced prices. Quotations are: No. 1 timothy, \$20@20.50; No. 2 timothy, \$18.50@19; clover, mixed, \$18@18.50; rye straw, \$7.50@8; wheat and oat straw, \$7@7.50 per ton.

Potatoes.—A large supply of potatoes has reduced values generally; however, figures are still high as compared with other years. The quality of tubers is inferior. Average receipts are selling at \$1@1.05 per bu.

Provisions.—Family pork, \$18.50@19.50; mess pork, \$17.50; medium clear, \$17@19; smoked hams, 15½@16¢; briskets, 10@11¢; shoulders, 10¢; picnic hams, 13¢; bacon, 15@16¢; pure lard in tierces, 10¼¢; kettle rendered lard, 11¼¢ per lb.

Dairy and Poultry Products.

Butter.—The local trade has seen no change in butter values the past week. The market is active under normal receipts and a good demand. Quotations are: Extra creamery, 26¢; firsts, do., 25¢; dairy, 18¢; packing stock, 17¢ per lb.

Eggs.—Conditions are unchanged and prices steady. Fresh receipts, case count, cases included, are now quoted at 20¢ per dozen, which is last week's price.

Poultry.—Chickens are more plentiful and lower. Other kinds steady. Prices are: Live—Hens, 11@12¢; old roosters, 8¢; turkeys, 14@15¢; geese, 8@9¢; ducks, 12@13¢; young ducks, 14@15¢; broilers, 13@13½¢ per lb.

Cheese.—Michigan, old, 17¢; Michigan late, 14½@15½¢; York state, new, 14@15¢; Swiss, domestic block, 19@21¢; cream brick, 15@16¢.

Veal.—Market steady. Fancy, 11@12¢; choice, 8@9¢ per lb.

Fruits and Vegetables.
Cabbage.—Steady. Selling at \$2 per bu. for home-grown.
Plums.—Steady. quoted at \$1@1.25 per bushel.

Peaches.—The demand exceeds the supply and prices have advanced for all grades. Quotations: A. A., \$2; A., \$1.75; B., \$1.20 per bu.

Apples.—While prices have improved a little the trade is not on a satisfactory basis for the sellers. Average offerings are going at 50@75¢ per bu.

OTHER MARKETS.

Grand Rapids.

Tuesday morning was one of the best of the year on the city market. Peaches sold from 75¢@1.50; apples, 45@50¢; grapes went at low prices. Concord bringing 40@50¢ per bu., and best varieties in 4-lb. baskets at \$1.50 per dozen. Potatoes brought 85¢@1, tomatoes 50@60¢. Hay ranges from \$14@20, according to kind and quality. The egg market is firm and higher, the price to the shipping trade for fresh stock, loss off, is 16½@17¢. Butter is unchanged.

New York.

Butter.—Market is firm with prices a fraction above those of last week for most grades. Creamery specials are quoted at 27½@27¾¢; extras, 26@26½¢; firsts, 24@25¢; seconds, 22½@23½¢; thirds 20½@21½¢.

Eggs.—All grades are higher. Fresh gathered extras, 25@27¢; extra, firsts, 23@24¢; seconds, 19@20¢; western gathered whites, 22@25¢ per dozen.

Poultry.—Dressed. Values are lower. Turkeys, 10@15¢; do. young, 28¢; fowls, 12@17¢; western broilers, 14@19½¢. Alive—Steady. Western spring chickens, 15@15½¢; fowls, 15¢; turkeys, 13¢ per lb.

Chicago.

Wheat.—No. 2 red, 91¼@92¼¢; Dec., 95½¢; May, \$1.01½ per bu.
Corn.—No. 2, 67¼@68¢; Dec., 64¢; May, 65½¢ per bu.

Oats.—No. 2 white, 43@43½¢; Dec., 45½¢; May, 48¢.
Barley.—Malting grades, 95¢@1.21 per bu.; feeding, 70@90¢.

Butter.—Market very firm under a good demand. With the exception of a 2¢ advance on extra quality dairy, which occurred on Tuesday, prices are unchanged. Quotations are: Creameries, 21@26¢; dairies, 18@24¢ per lb.

Eggs.—The upward tendency noted last week is still in evidence, prices having advanced another cent on all grades during the past week. Market firm with trade active. Quotations are: Prime firsts, 20½¢; firsts, 19¢; at mark, cases included, 15@18¢ per dozen.

Potatoes.—The week opened with receipts more than 50 cars in excess of those for the corresponding days last week and prices declined 10@15¢. Market somewhat easier with Minnoscans quoted at 90¢ and Michigans at 75@80¢.

Beans.—Prices are holding steady at the recent decline. Market quiet. Choice hand-picked pea beans are quoted at \$2.15@2.20 per bu.; prime, \$2@2.05; red kidneys, \$2.75@3 per bu.

Hay and Straw.—The hay market is firm with all grades showing a slight recovery from last week's drop. Oat and wheat straw are slightly lower. Quotations: Choice timothy, \$22@23; No. 1 timothy, \$20@21; No. 2 do., \$18@19; No. 3 do., \$12.50@16.50; clover, \$10@14; rye straw, \$8.50@9; oat straw, \$7@7.50 per ton; wheat straw, \$5@5.50 per ton.

Boston.

Wool.—All grades of wool have come in for a share of the demand the past week and the market has a firm tone. Especially brisk were sales of Missouri offerings. Following are the leading quotations for domestic grades: Ohio and Pennsylvania fleeces—Delaine washed, 30¢; XXX, 28¢ asked; fine unmerchantable 22@23¢; ¼-blood combing, 26@26½¢; ¾-blood combing, 25½¢; ¼-blood combing, 25¢; delaine, unwashed, 25¢; fine unwashed, 21¢ Michigan, Wisconsin and New York fleeces—Fine unwashed, 19@20¢; delaine do. 23@24¢; ¼-blood do., 24½@25¢. Kentucky, Indiana and Missouri—¾-blood, 25¢; ¼-blood do., 23½@24¢.

Eggs.

Butter.—Market firm at 26¢ per lb., which is last week's quotation. Output for the week 789,400 lbs., as compared with 827,700 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

September 18, 1911.

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

Receipts of stock here today as follows: Cattle, 175 cars; hogs, 95 double decks; sheep and lambs, 80 double decks; calves 1,400.

With 175 cars of cattle on our market here today, and 23,000 reported in Chicago, all good grades of fat cattle sold full strong with last week, and two or three loads, the only really prime cattle here sold about 10¢ per cwt. higher. Common and medium grades were steady at last week's prices with no material advance. Everything sold at the close of

the market, and the market closing active on all good grades of fat cattle.

Best 1,400 to 1,600-lb. steers, \$7.60@7.90; good prime 1,300 to 1,400-lb. do. \$7@7.60; do. 1,200 to 1,300-lb. do. \$6.80@7.40; best 1,100 to 1,200-lb. shipping steers, \$6@6.50; medium butcher steers, 1,000 to 1,100 lbs., \$5.75@5.85; light butcher steers \$4.50@5.25; best fat cows, \$4.75@5.25; fair to good do., \$3.50@4.50; common to medium do., \$2.75@3.25; trimmers, \$1.75@2.75; best fat heifers, \$5.75@6.25; good fat heifers, \$5@5.50; fair to good do., \$4.25@5; stock heifers, \$3.25@3.50; best feeding steers, dehorned, \$4.25@4.50; common do., \$3.75@4; stockers, all grades \$3.50@4; prime export bulls, \$4.25@5.50; best butcher bulls, \$4.50@5; bologna bulls \$3.50@4; stock bulls, \$3.25@3.75; best milkers and springers, \$55@60; common to good do., \$20@35.

Today's hog market opened about 10¢ lower than the close of last week, and trade ruled fairly active at the prices. The bulk of the choice quality yorkers, mixed and mediums selling at \$6.55@6.60, and best quality heavy hogs around \$6.40@6.50. Common and grassy kind of yorkers and mixed selling around \$6.45@6.55; the common grades and the heavier ends around \$7@7.25; pigs sold mostly at \$6.90 for the good quality and weights, and on down to \$5.50 for light weights. Rough sows sold mostly at \$6.20@6.25; stags around \$5@5.50 for the good kind. Hogs are fairly well cleaned up; market closing steady. Good many of the common and grassy hogs are not eating as much as they should, and a good many of the decks are showing heavy shrinkage. Conditions do not look favorable for any advance in prices and we advise conservative buying, as there is a possibility of lower prices.

The sheep and lamb market was active today at the prices. Most of the choice lambs sold from \$6.50@6.60. Wethers from \$4.10@4.35. Look for little stronger prices the balance of the week; everything sold tonight.

We quote: Best spring lambs, \$6.50@6.60; wethers, \$4.10@4.35; cull sheep, \$1.50@2.50; bucks, \$2.50@2.75; yearlings, \$4.50@4.75; handy ewes, \$3.75@4; heavy ewes, \$3.25@3.50; veals, choice to extra, \$9.25@9.50; fair to good do., \$8.50@9; heavy calves, \$4@6.

Chicago.

September 18, 1911.

Cattle. Hogs Sheep.
Received today 23,000 25,000 40,000
Same day last week 28,577 20,861 47,577
Received last week 57,488 91,766 165,856
Same week last year 69,156 85,067 135,906

Cattle were sold today at generally steady prices, with an excellent demand for fat steers, and \$8.15 was paid once more for the best. Local packers were in no hurry about buying, however, and at a late hour their selections were only moderate in volume. Cows and heifers and stockers and feeders, all of which averaged 10@15¢ higher last week for the better class, ruled steady. About 5,000 western range cattle showed up and sold at last week's rise of 10@15¢. Last week 17,000 western rangers arrived, compared with 11,000 the preceding week and 24,000 a year ago. Hogs, which slid off about 10¢ last week, had another 10¢ drop today, although one sale was reported as high as \$7.40, also last Saturday's top. Hogs sold all the way down to \$6.55, while pigs went at \$4.25@6.80 and stags at \$6.90@7.25. Boars brought \$2.50@3. Light and medium-weight butcher hogs sold highest. The poor shipping demand for hogs is a great help to local packers in depressing prices, only 11,817 hogs being shipped from here last week, compared with 19,180 a week earlier and 25,114 a year ago. Hogs received last week averaged in weight only 225 lbs., compared with 241 lbs. a week earlier, 259 lbs. one year ago and 229 lbs. two years ago. The market has turned for sheep and lambs in favor of sellers, and there was a rise of 10¢ for the best wethers today, following last week's advance of 15@25¢ in fat sheep and 35@50¢ in fat lambs. Lambs are selling at \$4.25@6.25; wethers at \$3.65@4.35; ewes at \$2.50@4; bucks at \$2.25@3 and yearlings at \$3.75@4.75. Feeders pay \$4.50@5.50 for lambs; \$3.25@3.60 for wethers and \$3.85@4.50 for yearlings.

Cattle have not been marketed in particularly liberal numbers for the past week, but buyers have worked hard to force prices to a lower level and have had some success, although the limited offerings of strictly prime corn-fed beefs have made it no easy matter to send these down along with ordinary and medium grade cattle on the grassy order. The eastern situation has a decided bearing on the market at this time, as Ohio, Pennsylvania, Maryland and the Virginias are short of hay. Few cattle are being purchased by stock feeders thereabouts, and remaining supplies of cattle are being marketed as fast as possible. This results in large eastern supplies of beef cattle from home territory, rendering them in large measure independent of Chicago and other western points. Eastern butchers have been getting a good many cattle from the southeast, and competition between buyers in the Chicago market has become smaller than usual. Beef steers have been selling at \$4.75@5.75 for the commoner kinds of grass-fed cattle and at \$7.50@8.05 for choice fed stock, with sales largely at \$5.80@7.75, and sales were made up to \$8.20 Monday. Exporters made their purchases at \$6.50@7.10 for a middling class of steers, and desirable lots of yearlings brought \$6.50@7.90. Cattle below \$6 were hard to sell, and even good cattle were being sold considerably reduced, choice beef being considerably reduced, choice cows and heifers, a few going higher, and a sale was made of 31 fancy Hereford heifers that averaged 763 lbs. at \$7.50. Cutters sold at \$2.85@3.45, canners at \$1.85@2.80 and bulls at \$2.75@5.75. Calves brought \$3@9.50 per 100 lbs., the choicer lots being unusually high and very active. Western range cattle fat.

were in very fair supply and salable at \$4.25@7.10 for steers and \$3@6.15 for cows and heifers. The stocker and feeder trade was fairly good at high prices, stockers going at \$3.40@5.15 and feeders at \$4.75@5.85, while stock heifers brought \$3.50@4. Milch cows were in fair demand at \$30@70 per head.

Hogs are not being rushed to market in anything like the liberal numbers that were predicted by the packers several weeks ago, and there have been hitches in their plans formed for placing prices on a much lower basis. Reactions have followed declines in values, and it is now generally admitted that the large country supply of matured hogs that was counted upon is fictitious. Conditions are certainly favorable for owners who have healthy young hogs, and these should be matured, as there is no surplus of hogs in the country, the crop having been closely marketed. Prices cover a wide range, as is apt to be the case when large numbers of heavy, summer-fed sows are being marketed, and little 40 to 50-lb. pigs from districts where sickness prevails in farmers' holdings go lowest of all. The decreased recent receipts of hogs have been partially offset by the restricted eastern shipping demand, and this means, of course, lessened competition between buyers. Hogs of light and medium butcher weights have been prime favorites with buyers, and extremely heavy hogs sold lowest, as usual. Eastern shippers say the demand for light and butcher classes of hogs in the east is met from the crop of hogs grown in the territory east of here, and they claim that this condition is likely to prevail for about five more weeks.

Sheep and lambs have been marketed in extraordinarily large numbers, receipts much exceeding those for recent years at corresponding periods, and this has been responsible for the low prices realized. Sheep have continued to make much poorer returns for their owners than lambs, as usual, being in much larger demand, but recent rallies in prices have taken place. The range country is now furnishing a liberal share of the offerings, and they average extremely well in quality, even the feeders showing up well. Still, lambs look low in price when it is recalled that a little more than a month ago sales were made as high as \$7.25. Top a year ago stood at \$7 and two years ago at \$7.65. A good demand exists for breeding ewes at \$3.50@4.25, yearlings going highest, and the demand for range feeding lambs has at last become strong, prices being very low.

Horses have been received in fairly large numbers for another week, the worst feature being the predominance of ordinary animals, which moved off slowly at weak values. There was a very fair demand for the choicer kinds, but few were on sale, and some buying orders could not be filled, prices ruling firm throughout. Fair trading took place in expressers, chunks and wagon horses at \$150@225 per head, and moderate sales were made of southern chunks at \$65@165. Not many heavy drafters of the \$250@340 class were offered, but on one day a small order for wagon horses of the better class was filed at \$255.

LIVE STOCK NOTES.

After a long period of comparative inactivity lamb feeders have at last aroused themselves and have made extensive purchases in the leading western markets. In a recent week they purchased at the Chicago stock yards nearly 51,000 head, including sheep, yearlings and lambs. Up to the close of August shipments of feeders from western markets were 300,000 head less than a year ago, but low prices are now stimulating the demand, the best feeding lambs from the western ranges having been offered on the Chicago market recently for \$1.35 per 100 lbs. less than a year ago and \$1.05 less than the average of September prices for the last five years. Michigan sheepmen are now starting in to buy more freely, the largest buyers heretofore having been sheepmen living in Indiana, Illinois and Iowa, who have been taking the bulk of the offerings on the feeder order for placing in their corn fields.

The outlook for the future beef cattle market is such that owners of well-bred cows and heifers are not justified in selling them. The female cattle will all be needed, since the consumption of beef has at last overtaken its production. The ranges are rapidly narrowing in area, and the production of range cattle is therefore shrinking all the time. This is brought out distinctly this year, the marketing of western range cattle up to the present time having been greatly short of the corresponding period last year. Strictly prime beef cattle are bound to sell extremely high for a long period, according to all the indications, and even medium grade cattle are doing well for their owners, prices averaging higher than in most former years.

While the disease generally known as hog cholera has ceased to rage to the extent that it did years ago, when less attention was generally given to raising hogs for the market, it has never wholly died out, and appears in various quarters occasionally. As is always the case after farmers start in feeding green corn to their pigs, cases of sickness are reported in some portion of the corn belt, and this has started a good many little pigs marketed. These little ones, some of which weigh only about 40 pounds, have to go at extremely low prices, and sales have been made in the Chicago market as low as \$4.25@4.50 per 100 lbs. Many of these pigs have been shipped from points in Illinois.

Late reports received from Montana, say that the range conditions are very good this year, and hay is plentiful. Late rains made good feed, and owners of cattle and sheep are not disposed to market their cattle and sheep until they are

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.

September 21, 1911.

Cattle.

Receipts, 1,126. Market on cattle selling below 4c 15@25c lower; all other grades steady.

We quote: Best steers and heifers, \$5.75@6; steers and heifers, 1,000 to 1,200, \$5@5.50; steers and heifers, 800 to 1,000, \$4.50@5; grass steers and heifers that are fat, 500 to 700, \$3.75@4.25; choice fat cows \$4@4.25; good fat cows, \$3.50@3.75; common cows, \$2.50@3.25; canners, \$1.50@2.25; choice heavy bulls, \$4@4.50; fair to good bolognas, bulls, \$3.50@3.75; stock bulls, \$3@3.25; choice feeding steers, 800 to 1,000, \$4.50@5.10; fair feeding steers, 800 to 1,000, \$4@4.50; choice stockers, 500 to 700, \$4@4.50; fair stockers, 500 to 700, \$3.50@4; stock heifers, \$3.25@3.50; milkers, large, young, medium age, \$4@60; common milkers, \$25@35.

Spicer & R. sold Schroder 1 bull weighing 850 at \$3.50; to Bresnahan 17 butchers av 632 at \$3.60, 1 cow weighing 1,070 at \$3, 1 do weighing 970 at \$3, 2 do av 1,310 at \$4.50; to Kamman 11 do av 860 at \$2.85, 14 do av 960 at \$3.60, 4 do av 962 at \$3.25; to Hammond, S. & Co. 5 steers av 990 at \$5.25, 2 do av 890 at \$6.25; to Breitenbeck 2 cows av 1,040 at \$3.75, 2 do av 870 at \$2.85, 1 do weighing 900 at \$2, 1 do weighing 790 at \$2; to Lachalt 10 butchers av 809 at \$4.75; to Schroder 4 bulls av 850 at \$3.75, 1 do weighing 770 at \$3.60; to Mason 6 butchers av 553 at \$3.50; to Rattkowsky 1 cow weighing 1,050 at \$3.60; to Fish & Young, 11 stockers av 800 at \$4.25; to Bresnahan 9 butchers av 790 at \$4.25; to Megan 11 do av 563 at \$3.60, 1 cow weighing 650 at \$3; to Marx 4 steers av 910 at \$4.75, 4 do av 630 at \$3.70.

Rishop, B. & H. sold Parker, W. & Co. 12 cows av 966 at \$3.35, 1 do weighing 880 at \$3.35, 1 bull weighing 860 at \$3.75, 2 do av 720 at \$3.50, 1 do weighing 1,310 at \$4.25, 1 do weighing 1,450 at \$4.50, 2 do av 940 at \$4, 6 cows av 945 at \$3.25, 1 steer weighing 850 at \$5, 2 cows av 875 at \$3.25, 2 do av 1,010 at \$3, 1 do weighing 1,040 at \$4, 5 butchers av 496 at \$3.50, 9 cows av 952 at \$3.35; to Hammond, S. & Co. 1 bull weighing 1,200 at \$4.15, 3 heifers av 770 at \$3.85, 12 butchers av 606 at \$3.35, 1 cow weighing 1,150 at \$4.25; to Goose 3 cows av 990 at \$3.50; to Regan 12 heifers av 535 at \$2.70, 2 do av 515 at \$3.15; to Fry 10 butchers av 800 at \$4; to Rattkowsky 5 do av 506 at \$3, 2 cows av 975 at \$3.60; to Mason 3 do av 900 at \$3; to Sullivan P. Co. 2 do av 1,135 at \$4.25, 9 butchers av 550 at \$3.35; to Bresnahan 9 heifers av 634 at \$3.85; to Rattkowsky 5 cows av 876 at \$3.75, 15 butchers av 776 at \$3.80; to Lachalt 8 steers av 925 at \$4.80; to Lowenstein 5 heifers av 140 at \$3.75, 12 stockers av 650 at \$3.25; to Bresnahan 8 canners av 892 at \$2.75; to Heinrich 19 steers av 970 at \$5.50, 3 do av 953 at \$4.75; to Breitenbeck 12 steers av 943 at \$4.80.

Roe Com. Co. sold Lowenstein 4 stockers av 480 at \$3.25; to Schroeder 2 bulls, av 1,000 at \$4, 2 do av 700 at \$3.50; to Bresnahan 3 cows av 850 at \$3.25; to Parker, W. & Co. 1 do weighing 800 at \$2.50, 4 do av 970 at \$3.50, 6 do av 923 at \$3.25, 4 bulls av 632 at \$3.25; to Hammond, S. & Co. 3 do av 700 at \$3.25; to Regan 23 butchers av 608 at \$3.55; to Parker, W. & Co. 1 bull weighing 1,200 at \$4; to Sullivan P. Co. 3 do av 643 at \$3.25, 10 butchers av 503 at \$3; to Bresnahan 4 cows av 795 at \$3; to Mason 2 butchers av 550 at \$3.50, 1 cow weighing 540 at \$2.25; to Parker, W. & Co. 1 cow weighing 950 at \$4, 26 steers av 909 at \$4.50; to Sullivan P. Co. 10 do av 1,055 at \$5, 3 heifers av 797 at \$4.25.

Haley & M. sold Kammon 1 cow weighing 920 at \$2.50, 1 do weighing 1,030 at \$4.10, 19 butchers av 744 at \$3.60, 5 do av 692 at \$4.10; to Bresnahan 3 cows av 907 at \$3, 1 do weighing 700 at \$3; to Sullivan P. Co. 1 do weighing 1,030 at \$4.60; to Schroeder 1 steer weighing 600 at \$3.75, 2 do av 760 at \$4.10, 5 bulls av 664 at \$3.15; to Parker, W. & Co. 1 bull weighing 1,020 at \$4, 1 do weighing 990 at \$3.75; to Kammon, B. Co. 1 steer weighing 740 at \$3.65, 5 do av 800 at \$4.40; to Applebaum 2 cows av 1,015 at \$3.70, 2 heifers av 850 at \$3.25, 2 cows av 1,025 at \$3.85, 1 steer weighing 540 at \$3.50, 2 do av 700 at \$4.15; to Hammond, S. & Co. 1 cow weighing 1,050 at \$3.25; to Schroeder 6 stockers av 633 at \$4.25; to Parker, W. & Co. 6 bulls av 1,136 at \$4; to Kamman 6 butchers av 866 at \$3.85; to Newton B. Co. 6 bulls av 529 at \$3.70; to Bird 8 stockers av 447 at \$3; to Brown & R. 10 feeders av 885 at \$5.10; to Herschleman 4 butchers av 852 at \$4.25; to Sullivan P. Co. 8 do av 954 at \$4.65; to Thompson Bros. 7 do av 677 at \$4.25.

Veal Calves.

Receipts, 454. Best grades 25c higher; common steady. Best, \$8.75@9.50; others, \$4@8; milch cows and springers steady.

Spicer & R. sold Mich. B. Co. 12 av 130 at \$8.50, 3 av 125 at \$9, 7 av 160 at \$8.50; to Rattkowsky 4 av 225 at \$5; to Mich. B. Co. 7 av 155 at \$9; to Sullivan P. Co. 4 av 145 at \$9.50; to Burnstine 5 av 125 at \$9.50; to Rattkowsky 7 av 155 at \$8.50; to Applebaum 4 av 225 at \$7; to Mich. B. Co. 6 av 185 at \$8.

Roe Com. Co. sold Goose 38 av 275 at \$3.25.

Bishop, B. & H. sold Newton B. Co.

5 av 160 at \$9.25; to Goose 8 av 325 at \$4.25, 5 av 275 at \$3.50, 2 av 160 at \$8; to Padwosky 11 av 160 at \$5.50; to Parker, W. & Co. 4 av 150 at \$9.25; to Burnstine 2 av 160 at \$6.50, 11 av 135 at \$9, 4 av 160 at \$8.50, 5 av 155 at \$9, 13 av 135 at \$8.50; to Sullivan P. Co. 4 av 135 at \$8.

Sheep and Lambs.

Receipts, 3,190. Lambs active and 50c higher; sheep strong. Best lambs, \$6@6.25; fair lambs, \$5@5.25; light to common lambs, \$4@4.50; fair to good sheep, \$3.50@3.75; culls and common, \$1.50@2.50.

Rishop, B. & H. sold Thompson Bros. 4 sheep av 130 at \$3.25, 34 lambs av 60 at \$4.50, 11 sheep av 100 at \$3.50, 17 lambs av 55 at \$4.50; to Newton B. Co. 28 do av 65 at \$4; to Schafer 47 do av 70 at \$5.55, 86 do av 85 at \$5.50; to Sullivan P. Co. 20 do av 55 at \$4, 9 do av 125 at \$3.25; to Mich. B. Co. 32 do av 72 at \$5.75, 22 do av 70 at \$5.60; to Hobbins 77 do av 65 at \$6, 42 do av 85 at \$4, 35 do av 65 at \$6; to Sullivan P. Co. 14 do av 55 at \$4; to Fitzpatrick Bros. 59 do av 65 at \$6, 15 do av 55 at \$5, 14 sheep av 105 at \$3; to Hobbins 143 lambs av 75 at \$5.55; to Sullivan P. Co. 19 do av 60 at \$4, 22 do av 53 at \$3.50, 23 sheep av 110 at \$3.25; to Newton B. Co. 40 do av 95 at \$5.25; to Thompson Bros. 16 lambs av 55 at \$5.25; to Parker, W. & Co. 15 sheep av 90 at \$2, 49 lambs av 60 at \$4.70, 31 sheep av 120 at \$3.50, 22 lambs av 60 at \$4.25; to Young 21 do av 80 at \$6.25, 13 do av 68 at \$4; to Sullivan P. Co. 51 do av 75 at \$5.60; to Mich. B. Co. 60 do av 68 at \$5.65.

Spicer & R. sold Mich. B. Co. 34 lambs av 60 at \$5.25; to Hobbins 55 do av 80 at \$5.75, 36 do av 65 at \$5.65, 20 do av 65 at \$5.65, 85 do av 65 at \$5.50; to Mich. B. Co. 16 sheep av 105 at \$3, 17 lambs av 80 at \$5.25, 9 do av 55 at \$5; to Thompson Bros. 14 sheep av 50 at \$3.75.

Haley & M. sold Schaffer 26 lambs av 80 at \$5.50; to Barlage 32 sheep av 82 at \$2.50, 6 lambs av 70 at \$5.50.

Hogs.

Receipts, 3,157. Market 10@15c lower than last week.

Range of prices: Light to good butchers, \$6.75@7; pigs, \$6.25@6.35.

Roe Com. Co. sold Sullivan P. Co. 225 av 190 at \$7, 46 av 190 at \$6.90.

Spicer & R. sold Hammond, S. & Co. 115 av 200 at \$7, 150 av 160 at \$6.85, 105 av 150 at \$6.75, 86 pigs av 125 at \$6.25.

Haley & M. sold same 280 av 190 at \$7, 170 av 180 at \$6.90, 75 av 160 at \$6.75.

Bishop, B. & H. sold Parker, W. & Co. 720 av 200 at \$7, 810 av 175 at \$6.90, 205 av 180 at \$6.95.

Friday's Market.

September 15, 1911.

Cattle.

Receipts this week, 1,334; last week, 1,222. Market dull at Thursday's prices.

We quote: Best steers and heifers, \$5.75@6; steers and heifers, 1,000 to 1,200, \$4.75@5.50; do. 800 to 1,000, \$4.50@5; grass steers and heifers that are fat, 800 to 1,000, \$4.50@5; do. 500 to 700, \$3.75@4.50; choice fat cows, \$4@4.50; good fat cows,

\$3.75@4; common cows, \$3@3.40; canners, \$2@2.75; choice heavy bulls, \$4.50; fair to good bologna bulls, \$3.75@4; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4.25@4.50; fair feeding steers, 800 to 1,000, \$3.75@4.25; choice stockers, 500 to 700, \$3.80@4.25; fair stockers, 500 to 700, \$3.50@3.75; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4@60; common milkers, \$25@35.

Veal Calves.

Receipts this week, 560; last week, prices, best, \$8.50@9; others, \$4@8. Milch 680. Common grades, \$1@1.25 lower than last week; good steady at Friday's cows and springers steady.

Sheep and Lambs.

Receipts this week, 6,227; last week, 4,716. Market steady at Thursday's prices. Best lambs, \$5.50; fair lambs, \$4.75@5.25; light to common do. \$3.50@4.25; fair to good sheep, \$3@3.25; culls and common, \$1.50@2.50.

Hogs.

Receipts this week, 5,031; last week, 4,915. Market dull at Thursday's prices. Range of prices: Light to good butchers, \$6.75@7.15; pigs, \$6.25@6.50; light yorkers, \$6.75@7.15; heavy, \$6.75@7.15.

VETERINARY

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

Advice through this department is free to our subscribers. Each communication with initials only will be published. Many queries are answered that apply to case in full; also name and address of should state history and symptoms of 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.

Nervousness—Gnawing Feed Box—Switching and Pawing.—I purchased a ten-year-old mare last spring that has a habit of gnawing feed box; she also has bad habit of switching when no flies are near her; she also has a habit of pawing. C. K., Lawrence, Mich.—Your mare is nervous and being of this temperament I am not surprised to hear that your Vets. both failed to effect a cure. Mix together equal parts ground nux vomica, gentian, quassia, ginger and bicarbonate of soda and give her a tablespoonful or two at a dose in feed two or three times a day. Lower feed box and oil anus with vaseline.

Knuckling.—We have a five-year-old horse that has never been driven fast or worked hard, which seems to be coking over on fetlocks, and would like to know the best remedy. A. F., Freeland, Mich.—Some horses have straight upright pasterns and, of course, this kind easily tilt forward. Knuckling is usually

the result of sprain of ligaments of fetlock, or a weakening of them. Apply equal parts turpentine, aqua ammonia and raw linseed oil twice a week.

Indigestion—Looseness of Bowels.—I have a horse 21 years old that has worked hard all summer, kept in good condition until three weeks ago; since then he has purged considerable and lost flesh. He has a good appetite, eats plenty of grass, but is unable to work. E. S., Carsonville, Mich.—Have his teeth floated, give him some ground oats and corn and dry fodder in place of grass. Give him 1 oz. ground gentian, 1 oz. ground ginger and 1 oz. powdered charcoal at a dose in feed three times a day. If purging does not cease in ten days give 1 oz. doses tincture of opium four times daily.

Indigestion.—I have a cow three years old that had her first calf six months ago, and about every five days she acts as though she had the colic, but it may not be colic. When these attacks come on she refuses food for a time and when she eats she nibbles and does not take enough to support her. I called our Vet. and he pronounced it a case of indigestion and prescribed a remedy, which has not helped her much. J. P. D., Grand Rapids, Mich.—She should be purged gently; give ½ lb. doses of sulphate of magnesia daily until her bowels move fairly free, then give 1 oz. ground gentian, 1 oz. bicarbonate of soda and 2 drs. ground nux vomica at a dose in feed or as a drench in a pint of water three times a day. Study out the right sort of food supply for her, for a change of diet will help her. Give her plenty good water to drink.

Deep Milker—Weak Eyes—Pin Worms.—I have a four-year-old cow that has been dry all summer but did not fatten up; she came fresh about two weeks ago and gives 20 qts. of milk daily, but she is getting thinner every day. She appears to be in good health and her milk is of good quality. I would like to know what to give her that will build her up and cause her to take on flesh. I also have a fox terrier pup that has a watery discharge from both eyes; she must have inherited this weakness from her father and mother, as they were both affected the same way. She also has pin worms. F. J. B., Maple City, Mich.—Give your cow more corn and fat-producing food; also give her 1 dr. ground nux vomica, 1 oz. powdered cinchona, 1 oz. ground gentian and 1 oz. ground ginger at a dose in feed two or three times a day. Apply a saturated solution of boric acid to eyes twice daily. Wash out bowel with an infusion of quassia three times a week.

Weak Pigs.—Have a litter of pigs one week old that wobble when walking; they have poor control of their hind quarters. I would like some advice regarding the treatment of them. N. P., Coloma, Mich.—The sow should be kept clean, fed a good quality of food and kept in a dry place. Sunlight is refreshing to young pigs. Apply boric acid to navel twice a day.

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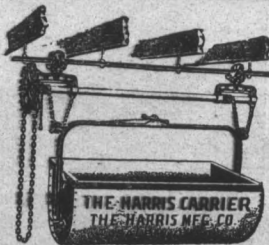
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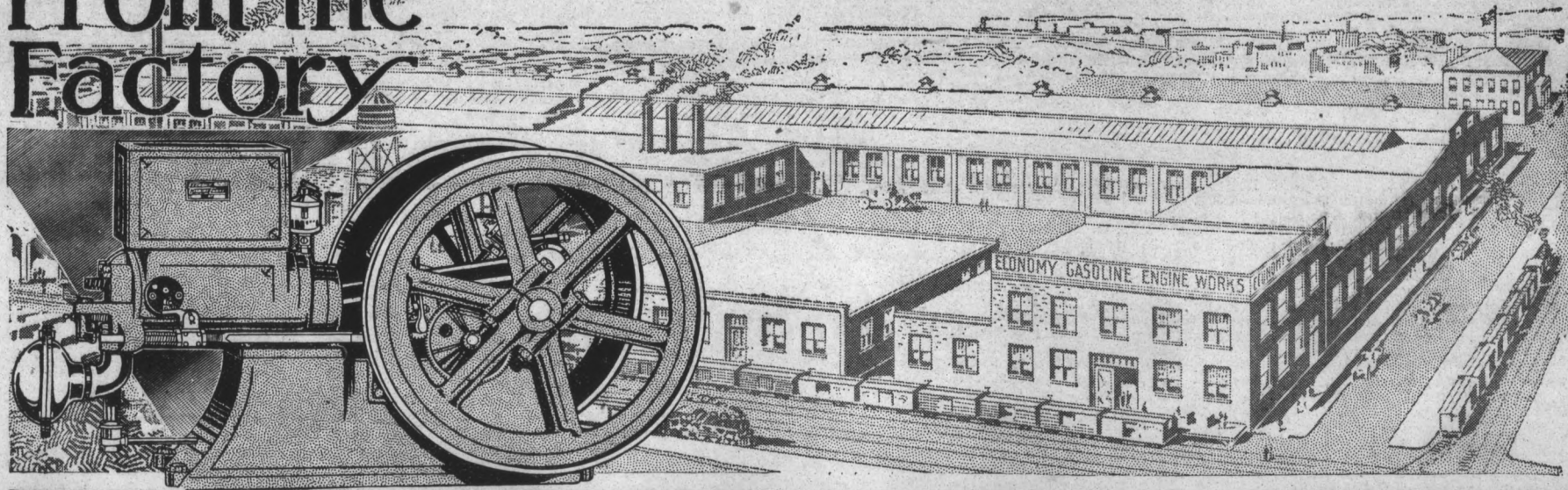


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