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Selection of Seed and its Care.

The topic for special discussion in the Michigan Farmer during August, is one of greater importance than the average farmer appreciates. The character of the seed is just as important as the character of the breeding stock used in our herds and flocks. Experience has conclusively shown that strains of seed in plants are as prepotent to reproduce the good qualities of their ancestors as strains of blood in animals, hence the desirability of using seed from parent plants that have produced well. But, of course, it should be remembered in this connection that, like animals, plants must be well nourished for maximum production. Perhaps the general failure to recognize this important fact to the fullest extent has been responsible for the frequent disappointment of farmers who have invested in pedigreed seed and failed to grow satisfactory crops from it. But, other factors being equal, there is no doubt that seed from productive strains of plants will produce a more satisfactory crop than seed from poor or indifferent strains of the same varieties.

For this reason, the farmer who would keep in the lead in crop production must do more than simply select good, sound seed that will grow well from the best yielding varieties of grains, or vegetables. If he would secure the best results, he must plant seeds of the most productive strains of these varieties. The cumulative results from such selection is well illustrated in the sugar beet crop, which is a most important item of Michigan farm production. Through generations of careful selection and propagation of strains containing a high percentage of sugar, the average sugar content of the beet crop has been very materially increased during the comparatively short history of this industry. Fortunately for our farmers who have been engaged in this industry, skilled plant breeders have been engaged in this work, and the manufacturers of beet sugar have secured the best seed available for the growers who have produced their beets. But, while this improvement has been brought about without any personal effort on the part of the beet growers, who know little of the actual progress which has been made in this direction, yet it is an example of the possibilities in this direction which should be an object lesson to every farmer.

In this connection the writer cannot refrain from mentioning some plant breeding work now being carried on by the Michigan Experiment Station with alfalfa and timothy. These experiments show very conclusively the results which may be secured by the simple process of selecting especially productive plants for propagation and saving the seed which these plants produce under favorable conditions of plant nourishment. In this way it has been found possible to develop strains of seed which combined the desirable qualities of a maximum production of forage and a maximum of seed production, notwithstanding the fact that alfalfa does not usually seed well in a humid climate, such as we have in Michigan in a normal season.

From these results it will be seen that the average farmer might profitably do something in the line of seed breeding. The best heads of wheat, the best hills of potatoes, the best ears of corn, etc., may well be saved and propagated in breeding plats and the product of these plats be planted on the best spot in the field devoted to the main crop with the

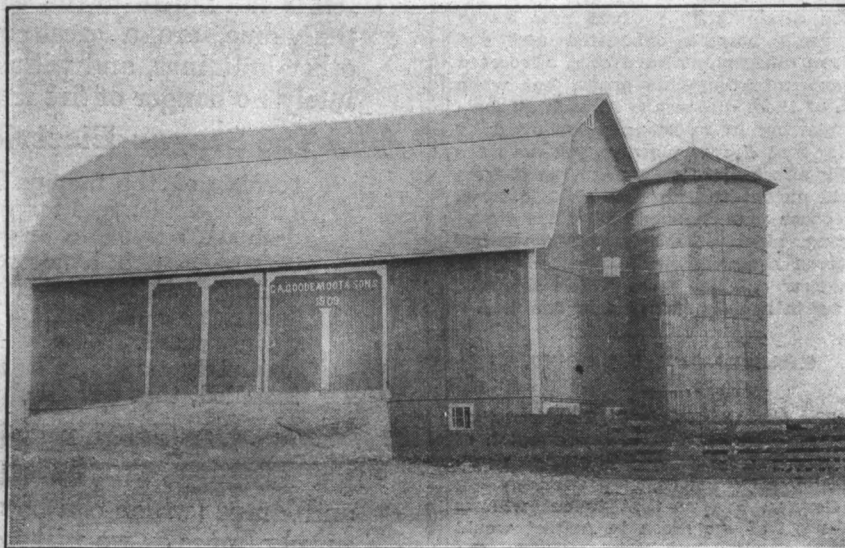
idea of saving the seed from the product for the main crop the following year. There is no doubt that this would be a profitable line of work for the general farmer, as it now is for the seed-growing specialist.

But our topic relates more particularly

his neighbors can hardly be overestimated.

The Selection of Seed Grain.

In the selection of seed of the small grains, the yield of the crop and the weight and quality of the grain produced is of much greater importance than simply the appearance of the seed sample.



Barn of a Popular Type on Farm of G. A. Goodemoot & Sons.
This barn is 36x60 ft., with 16-ft. posts, two 14-ft. drives and 8½-ft. basement. Silo is 14x30 ft.

to ordinary seed selection and care, and it will be more profitable to confine this article to that subject proper than to elaborate on the possibilities of the selection and breeding of individual prolific strains of plants. However, the farmer who becomes interested in the possibilities of bettering his crops through the medium of more carefully selected and better cared for seed, will naturally carry the application of this principle to its logical conclusion and become a breeder of good seed, in the sense that he will select and propagate the seed from the best producing plants for use in producing his main crops. With him the practice of thus paving the way for the success of future crops becomes a fixed one, and the influence of his example among

Low producing plants often bear large kernels of grain, hence the wisdom of getting seed from a high-yielding field, and grading the seed in accordance with the density and weight, rather than the size of the kernels. With this fact in view it is good practice to save the seed grain at threshing time, selecting it from the best yielding field or part of the field, as the case may be.

With the corn, the same general principles will apply with some modifications due to the fact that corn cross pollinates, while the small grains are fertilized by pollen from the same heads. However, the seed corn should be selected with greater care for this very reason, and obviously the best time to select it is when the whole plant can be taken into

consideration, probably before the crop is cut, but certainly before severe freezing weather occurs.

But after good seed is selected it is necessary that it be well cared for if satisfactory results are to follow its use. It should be dry and kept in a dry place. Seed corn, particularly, needs to be well dried out and kept properly in storage over winter to insure vigorous germination. Various forms of seed corn racks have been devised for this purpose, and many of them have been described in the Michigan Farmer. The type of rack used may be safely left to the preference of the farmer, and the best form of rack in any individual case will depend upon where the seed is to be stored. The essential thing is that it should accommodate the ears in such a manner as to insure a free circulation of air about every portion of each. It is a common experience with most farmers to find that their seed corn is poor in germinating quality when planting time comes, and to this fact many poor corn crops are due. There is no department of seed selection and care which would pay better dividends to any farmer than the proper selection and care of the seed corn.

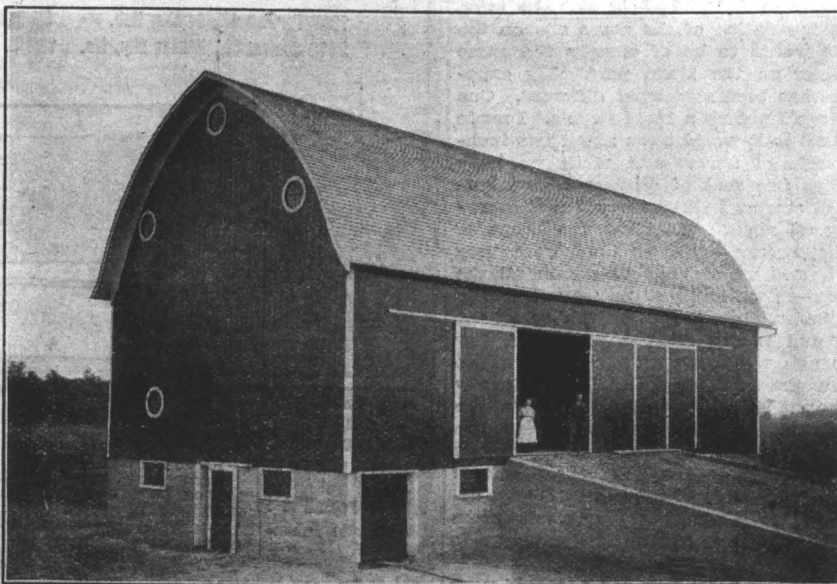
Seed of the small grains is not so frequently injured by bad care, but even with this seed it will pay to exercise more than ordinary care to insure that its vigor may be unimpaired when seeding time comes.

Grass Seeds Generally Neglected.

The selection of clover and grass seeds is a matter which the average man usually delays until the time arrives for using them. This is a serious mistake, as often pure seed of good quality is then difficult to get. It will be more satisfactory, and generally far cheaper, to select the clover and grass seed in the fall, when a good quality of clean seed can generally be purchased of a grower at a much smaller price than will have to be paid to the dealer in the spring for a less desirable product. It will generally be an excellent investment to buy the clover seed in the fall and store it in a suitable place until needed, and this is particularly likely to be true in a season like the present when there is a prospect of a short crop of the new seed.

The seed potatoes question was rather thoroughly discussed in the Michigan Farmer last spring, and while some growers contended that they did not get satisfactory results from the selection of the best hills at digging time for use in the seed breeding plat, others were enthusiastic in their claims for this system. The great preponderance of testimony is in its favor and, in the writer's opinion, the time and labor expended in giving the system a thorough test will prove a profitable investment.

While many farmers will not give the matter of seed selection and care the attention which it merits at their hands, this very fact makes it more profitable as well as more necessary for their contemporaries to do so. A scarcity of good seed is felt every year, and the farmers who have a surplus are generally able to sell it for seed purposes at a considerable advance over the market price. Undoubtedly, the most important reason why every farmer should interest himself in this proposition is that he may have good seed for his own planting, yet the commercial side of the proposition is not an insignificant one and is capable of being developed into a profitable specialty on almost any farm.



Barn Built in 1910 upon the Farm of H. M. Keeler, Lapeer County, Mich.
The dimensions of this barn are 36x68 ft. with 18-ft. posts. Note its Self-supporting Round Roof.

FARM NOTES.

Winterkilling of Vetch.

I sowed 300 lbs. of winter or hairy vetch the first of last September, using half a bushel of rye and 25 lbs. of vetch seed per acre. The ground was plowed and a good seed bed prepared before sowing. This vetch came up very good, and was six to eight inches high when winter set in, but this spring there was no vetch to be seen. This was sown on light, wornout, sandy soil. Do you think I got spring vetch? Please give me your opinion, as I would like to sow again this fall. I would like instructions in regard to it.

St. Joseph Co.

E. R.

The sand or hairy vetch, or winter vetch, as it is designated in the above inquiry, is easily distinguishable from the spring varieties, by the covering of minute hairs on both leaves and stems, from which peculiarity it derives its name. If the seed was true to name, the winterkilling may have been due to too late sowing, or to a lack of the bacteria peculiar to the plant in the soil on which it was sown. Mr. J. C. McDowell, agriculturist of the United States Department of Agriculture, who has made a special study of the possibilities of this plant in Michigan and Wisconsin, advises sowing about the middle of August or even earlier, and in common with others authorities emphasizes the necessity of inoculation where the plant has not been grown on the land before. The best means of inoculation is the sowing of soil from a field where the plant has been successfully grown, or Mr. McDowell states that soil from a field upon which peas have been successfully grown will give a successful inoculation for the vetch. If such soil is not available, a pure culture could be obtained from the bacteriological department of the Agricultural College at nominal cost. Of course, inoculation is not always necessary and may not be in this case, if the plants grew thriftily. The mixture of seeds used was about right and under normal conditions it would seem that the plant would grow successfully under the cultural methods used. On soils in a poor condition of fertility, the plant is greatly benefited by an application of phosphoric acid and potash fertilizer. Nitrogen is not needed, where the bacteria is present in the soil, as with its aid the plant is a nitrogen gatherer like clover, with the advantage of being adapted to less fertile land.

Growing Vetch For Seed.

Will you kindly answer a few questions in your paper about sand vetch? First, when to sow both spring and winter vetch for seed, the best way to prepare soil and amount of seed to use per acre. How much should it yield per acre and what, if anything, should be sown with it? How late in the fall can it be sown to plow under for potatoes or beans the following spring? Is it a permanent pasture? If used as a soiling crop, how many times can it be cut in this part of the state in one summer? Where can one get the seed and at about what price?

Benzie Co.

SUBSCRIBER.

The hairy or winter vetch is the most profitable variety for Michigan use. This is best sown in August, but may be seeded in the spring with oats or barley. Usually when sown in the fall it is seeded with a light sowing of rye to hold the vines up, as noted in the reply to the preceding inquiry. Where it is grown for seed, however, it has been found difficult to separate the seed from the rye, and the use of winter speltz or emmer has been advocated for this purpose. However, for farm use the presence of the rye would not prove objectionable, as it should be sown with the vetch seed anyhow, but, of course, if grown for the market this would prove an objection. However, it is not likely that this seed will be very extensively grown for sale in Michigan, although it may prove profitable to produce it for home sowing on account of the rather high price of the imported seed. In an article by J. C. McDowell, published in the issue of July 15, that gentleman, who has devoted considerable attention to a study of the possibilities of this crop for Michigan, states that last year he saw crops of rye and vetch seed produced in Michigan worth \$20 per acre on poor sand land. The seed should be sown at the rate of 30 to 40 lbs. per acre with a half bushel of rye. Late sowing is likely to kill out if the winter is severe. It cannot be successfully used as a permanent pasture, as the plants die after producing seed. However, if it inclined to be a weed on many soils, and if not pastured too closely the ground will be reseeded. The writer is not informed as to whether the vetch will make a second growth after being cut for a soiling crop. Its principal use in Michigan has

been as a soil renovator, and it is probable that its use had best be confined to that purpose until the grower becomes well acquainted with it. An advertisement of the seed appeared in last week's issue of the Michigan Farmer, and samples and prices may be obtained by writing to the advertiser.

Quack Grass.

I am sending you a sample of a grass that is growing on a field that I recently bought. Last year it was plowed up and sowed to cow peas. It came up in the peas and was plowed under in the fall for wheat. It came up in the wheat and grew as high as the wheat. Will you please advise me as to the name of the grass and whether it can be killed out? Berrien Co. J. E. O'B.

The sample accompanying the above inquiry was quack grass, one of the most persistent weed pests in Michigan which, like most others with which we have to contend, was imported from Europe. This grass spreads by means of strong, underground root stocks, which produce buds and send up new shoots as they grow. The only really successful means of destroying it is thorough culture, either in the summer fallow or by the use of a hoed crop. The culture must be so thorough that no plant is allowed to develop leaves above ground for two months or more during the growing season. When so treated the plants must die, since the process of manufacturing food for the maintenance of the plant is carried on in the leaves, and after repeated attempts to produce new leaves the roots become exhausted and die. Various other plans have been advocated for exterminating this grass, but while some of them discourage it, such as shallow plowing in midsummer, followed by a later and deeper plowing, yet none are wholly effectual in exterminating it from a field except the plan of clean culture. Any other plan is bound to prove disappointing, since, if a few plants are left scattered over the field, these will soon form new colonies from which the pest will again rapidly spread over the field.

ERADICATING WILLOWS.

In The Farmer of July 29, I noticed that L. L. W., of Allegan Co., has a patch of willows which he wishes to kill, so I will give him our experience with willows. An old German told us that to cut willows in the old of the moon in August would kill them. We had little faith in the method but decided to give it a trial and strange to say, not one sprouted. At this time of year nearly all of the sap is in the trunk and top, finishing this year's growth and preparing for next year. By cutting at this time the return of the sap is prevented and the root is left too exhausted to make a fresh start. Upon another occasion we cut some willows in July. These quickly sprouted but as the field was pastured for the rest of the season the stock ate the tender shoots as soon as they appeared and they too were killed.

Branch Co.

T. H. W.

THE FOUNDATION FOR THE STAVE SILO.

I always read Mr. Lillie's articles with a great deal of interest and believe him to be usually about right. But I notice in his reply to J. E. M., July 29th, he says, "The foundation of the stave silo on the inside wants to be of exactly the same diameter as the stave part. My experience has been somewhat different. One year ago I put up a 14x34 ft. silo. I made the wall so it would come about two inches inside of staves and while we have perhaps five feet of ensilage above bottom of staves, I think we will find everything all right. We drew the hoops of this silo very tight, as they were very short, and we wanted to get in all the staves—as we know of no way to put in the "extra stave" without taking off the roof and nearly all the hoops. A few days ago we tightened the hoops above where the ensilage is and could easily have put our whole hand between the hoop and silo. I have another silo up about five years, built of timber seasoned two summers in the open pile. This is on the very edge of the pit, 6 ft deep, although we thought we gave it room enough. My silo put up one year ago is made of long leaf southern pine.

One of my neighbors has a silo so near the edge of the pit that if he were to draw the hoops tight it would go down—and nearly all who have put up silos in this vicinity have that "extra stave" but none seem to be able to use it.

Kalkaska Co.

D. P. ROSENBERG.

LIGHT YOUR HOME and Farm Buildings

YOU can have a complete, yet very simple, outfit for supplying electric lights to your house, farm buildings, etc., which is easier to operate and take care of than an automobile or ordinary farm machinery. You can do away with the use of oil lamps, lanterns and candles, which are inconvenient, a nuisance and a constant fire danger.

With our system installed

Simply Turn the Switch

in any building or room, at any time, night or day, and you instantly have light, and at a cost which is so low it would be hard for you to believe. Electric lights add much to the comfort and appearance of the home, are a great convenience in barns and other buildings, and with our system there is absolutely no danger of fire from the wiring.

The Seagar Electric Lighting System

consists of the famous **Olds Gasoline Engine** (which can be used for other power purposes if desired), a dynamo or generator for making the current, and a handsome switchboard for controlling and regulating it, and a set of storage batteries for storing the electric current to be used when wanted. This outfit is so simple and so absolutely certain in its operation, when properly installed, that we will ship it

On Trial for 30 Days—Free

Complete with the exception of wiring, fixtures and lamps (which can be obtained from any electric supply house or we will furnish if desired), with full instructions for installing and so simple that almost anyone can do the little necessary work. If it does not fulfill all our claims and to your entire satisfaction by the end of thirty days, you can return the outfit at our expense.

Write for our **free booklet**, which explains this system fully, and illustrates its many uses. Give us an approximate idea of your light requirements and a rough plan of your buildings and we will submit our proposition without obligating you in any way. We also make water systems and Olds gasoline engines from 1½ to 100 h. p.; write for our prices on corn shellers, corn huskers, feed grinders and cream separators.

Seagar Engine Works

915 Walnut St.

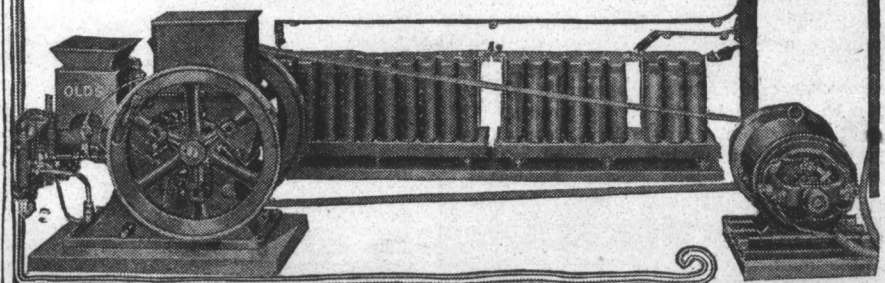
Lansing, Mich.

1007 Farnum St., Omaha, Neb.

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2112 Central St., Kansas City, Mo.

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SEED WHEAT

these seeds absolutely true to name, pure, clean, graded and in perfect condition for sowing. Booklet, prices.

O. C. SHEPARD CO., Station M., Medina, Ohio.

CHOICE SEED WHEAT.

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. Mealy wheat is also a red wheat but it is the bald variety. It is a most excellent wheat for very rich ground.

COLON C. LILLIE, Coopersville, Mich.

THE BEST SEED WHEAT

comes from Maplewood, acknowledged the leading Seed Wheat farm of America. Not the cheapest, but the very best, the most value for money asked. Write today for price list No. 15, samples and reports of customers. Also have high class beef-milk Shorthorns, Big Boned P. O. Swine, and Wool-Mutton Shoppers.

Maplewood Seed & Stock Farms, Allegan, Michigan.

SEED WHEAT POOLE, GIPSY, MEDITERRANEAN. See our samples, guarantee and prices. O. C. VALE, R. 5, New Carlisle, Ohio.

Gold Coin Seed Wheat.

Yield 274 bu. from 53 acres, 387 bu. from 8 acres. Bald wheat, very stiff straw. Price \$1 per bu.; add 25c each for new Stark A bags. J. W. Robinson, Holt, Mich.

Mention the Michigan Farmer when writing advertiser

RYE AS A SUBSTITUTE FOR WHEAT IN THE ROTATION.

I would like to ask Mr. N. A. Clapp, through your paper, how it would be to substitute rye in the place of wheat as a rotation crop? With us it seems a surer crop than wheat, on account of the severe winters.

Mecosta Co.

J. K. H.

Rye has some commendable features, some of which work advantageously to the success of the crop, and some disadvantageously to the farmers who raise it. The feature of hardness in rye is very apparent, and this enables it to endure and succeed under adverse conditions. Rye will produce a crop worth harvesting on land too poor to raise any other of the cereal crops, and will sap the last vestige of plant food from the run-down soil. It seems to be generally understood that there is no hope of raising any other grain crop after rye fails. Rye rotated with beans has finished many a field on the rented and poorly managed farms in the sandy districts of Michigan.

As a crop to use in the rotation on good fertile farms to seed with, I do not consider rye as good as wheat. On account of the rank growth of the rye early in the season the clover is shaded and kept back for a time. If the clover endures for a few weeks the leaves on the rye stalks dry and disappear, and then the clover can come forward, but it does not generally get as good a growth by harvesting time as in the wheat fields.

Rye manifests its hardness when one seeds to clover with it. There are always some rye heads left on the ground; the kernels sprout, take root in the soil and appear in the clover the following season. Some times the fields look like a crop of clover and rye, and in other cases it looks like a crop of rye with some clover.

As a grain crop rye is generally inferior to wheat, yielding from one-half to two-thirds as many bushels per acre. The price of wheat is generally considerably higher than that of rye. Last year was an exception to the rule, however.

To feed on the farm, to stock, when prices are too low to sell the grain, rye is again inferior. In fact, rye meal is a dangerous feed for work horses, except when mixed with double the amount of oat meal. Rye meal is not considered a good feed for dairy cows. From my own experience with rye meal I do not consider it a safe feed to give to pregnant animals of any kind.

There may be local conditions where it may seem advisable to sow rye in the rotation, but as a general money crop, and to seed with, for the majority of farmers in Michigan, I believe that rye is a poor substitute for wheat.

Wayne Co.

N. A. CLAPP.

PREPARED ROOFING.

The growing scarcity of timber, causing an advance in the price of shingles, has caused people to look elsewhere for material for roofing.

A very good substitute is found in the various prepared felt or asphalt roofings advertised in the Michigan Farmer.

The first cost of the prepared roofing is much less than the shingle roof, and if properly applied makes a roof, absolutely water, wind, snow, and fire-proof.

As to durability the prepared felt or asphalt roof will outlast the shingle roof, owing partly to the fact that the average shingle roof is made out of a poor quality of shingles. Especially is this true if the roof is made of the better grades of asphalt. Even the cheaper grades of paper roofing, if treated to a coat of roofing cement every two or three years, will give better and longer service than the shingle roof, and will be less expensive, as two men can roof a fair-sized building in a day.

The extra labor of cementing the paper roof, during the average life of a shingle roof, will not exceed the extra labor of laying a shingle roof, and if kept well cemented the asphalt roof will last as long as the building.

St. Clair Co.

J. D. GALBRAITH.

The dearth of hay is quite a factor in stock feeding these times, especially in parts of the country where the grass is poor on account of the drought, while corn is much higher in price than at the low time of the crop year. Prime timothy hay wholesales in the Chicago market at \$26 per ton, with sales all the way down to \$16.50 for the poorest grade, while new timothy hay is bringing \$18@23, according to quality. Clover hay in that market is selling at \$8@12, while choice Kansas and Oklahoma prairie hay is selling at \$20.50@21.

Get Plumper Wheat and More Wheat

HOW? Here is a progressive farmer's method and his own story of results.

"After more than fifty years' experience in growing wheat, I find there is still so much to learn. One fact of vast importance has been learned—that a thoroughly fine seed bed should be prepared. By 'thoroughly' I mean cultivate the land until it is fine enough. If the ground plows hard and lumpy, do not plow at all if it can possibly be pulverized fine to a depth of two and one-half or three inches by either a spring tooth or disc harrow. It is much better and surer for a crop than plowing. If the Fall is exceedingly dry, the wheat drilled on a hard bottom, if covered by an inch or two of very fine soil, will grow even if it does not rain. If the ground can be plowed, do not plow if you can possibly get a pulverized surface

of three or four inches. It is better than deep plowing. Wheat does better if the roots spread out on hard ground and covered one or two inches of very fine soil. Wheat will also stand better through the Winter; is less liable to freeze or heave out. About six or seven pecks to the acre is about the right amount of seed.

"For more than twenty-five years I have used commercial fertilizer on wheat, and find that in most cases it is surer than barnyard manure.

"If you use both, so much the better. Use the barnyard manure for the corn and potatoes or spread evenly on the meadows or pasture. If there is any left use it on the wheat. My experience has been mostly with

A. A. C. Co. High Grade Complete Fertilizer

as I find it does better than other makes on our soil. Fertilizer gives a plumper berry than barnyard manure. It also makes the crop earlier and

carries it better through the Winter. About 250 to 300 pounds per acre is what we use." (Name given on application.)

There is no chance to make any money at all out of a poor crop

We guarantee that our Fertilizers are brought up to the highest state of perfection and are made just right to produce the best results. There is no guess work about it. Every operation in the manufacturing of our Fertilizers is directed by expert chemists; scientific formulas are carefully observed; materials and the finished goods are thoroughly analyzed. When we print our guarantee on the bags we know that the goods are absolutely perfect and of the highest quality in every respect. Making Fertilizers and making good Fertilizers are two different propositions.

While the supply lasts, we will furnish this season A Banner Dissolved Bone, fine ground and perfectly dry, guaranteed to analyze not less than **34% Available Phosphoric Acid.** The actual analysis is about 36% Available. This Fertilizer is produced entirely from high grade animal bone, and is considered to be the best form of Phosphoric Acid for fertilizing wheat.

If there should be no agent in your town selling our Fertilizer, write us. It might mean business for you.

The American Agricultural Chemical Company

Detroit Sales Department, DETROIT, MICH.

Largest manufacturers of high grade Fertilizers in the world. Our factories never shut down



Hot Sun-Short Pastures Beware of Deadly WORMS

I'll Prevent Your Losses—I'll Prove It Before You Pay

Hot scorching sun, short pastures tend to multiply by the millions the deadly stomach and free intestinal worms. That's why stock run down, become gaunt, thin and sickly at this time of the year. Grass being short, your hogs, sheep, cattle, and horses take these destructive parasites into their systems by the wholesale. They sap the vitality, life blood and energy faster than the animal can renew it. Stock become sluggish, dull-eyed, emaciated and diseased; many die, especially lambs, sheep and hogs. Don't wait. Do something quick. Do it now before it is too late. Get Sal-Vet, the great medicated stock salt and conditioner; positive death to these destructive worms, also a parasite preventive. It rids the system of worms completely, aids digestion, tones the blood, and prevents infection. I'll prove it before you pay. I'll feed your stock Sal-Vet 60 days just to show you how quickly it will put an end to these deadly, life-sapping pests.

Send No Money—Just the Coupon

I'll send you enough Sal-Vet to last **ALL YOUR STOCK 60 days.** You pay the small freight charge when it arrives and pay for the Sal-Vet if pleased after 60 days' trial. Send coupon now.

SAL-VET

Sidney R. Feil, President
THE S. R. FEIL CO., Dept. M.F. CLEVELAND, OHIO
Prices 40 lbs., \$2.25; 100 lbs., \$5.00; 200 lbs., \$9.00; 300 lbs., \$13.00;
600 lbs., \$21.12. No orders filled for less than 40 lbs.

Read This Letter

"I have been in the hog business for 30 years and have tried every known remedy for hogs, but have never found anything equal to your Sal-Vet. It certainly does the work—is easy to feed. I feed it to little pigs, boars, pregnant sows and find it does the work without Sal-Vet."

C.F. Marshall & Son,
Monroe, La.

[39]

Send me enough Sal-Vet to last my stock 60 days. I will report you in 60 days and will then pay for it if it does what you claim. If it does not, you are to cancel the charge.

Name _____ P. O. _____ Shipping Sta. _____
State _____ Sheep _____ Cattle _____ Hogs _____
M.F. 8-12-11

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

LOCATION OF SILO AND BARN.

I am planning to put up a silo this fall and am just a little undecided where to put it. Would like to plan for a more up-to-date cow barn and have thought I would put up the silo away from the present old barn and then move the barns later. I have in mind a cow barn built of cement blocks and only one story, say 7 or 7½ ft. side walls with plenty of windows. Are the windows better placed so as to slide longways instead of up and down, and placed up near the top of the wall? I can move one of my old barns so as to slide longways instead of up and locate this back of drive floor of the grain barn. The end of this grain and horse barn next to cow barn I would use for storage of hay and so have a chute for hay into the same feeding alley as the silage chute thus making it convenient to feed. I want to keep the buildings so I can do chores without going out doors. Wish room for about 20 head of cattle. Tell me what you think of best dimensions for stable and if you can suggest any improvement do so. I will have the yards open to the lane which runs east and west and will have the barns face south. Would it be better to build my cow stable in line with the grain barn and so have the straw barn nearer the cow stable or could I have an alley way out of the barn to the front leading into the silo chute?

Oakland Co.

J. W. A.

I have seen several expensive and what would be considered up to date, sanitary, dairy barns built one story high. I am not prepared to say that they are any better than a basement barn, providing, of course, the basement is above the ground and well lighted and well ventilated. I do not see how it would be particularly advantageous to have the cow stable located away from the feed barn as would be the case with a dairy barn one story high. The cost and the cost of feeding is forever afterwards considerable more than it is with a good basement stable under a barn that is well lighted and well ventilated with the King system of ventilation. Such a stable is an entirely satisfactory, proper and comfortable place to keep cows. Now what more does a man want? If you build a cow stable one story high and just have it end up to the straw barn and the hay barn all of the fodder has got to be carried the entire length of the barn, part of it the entire length of two barns, and this, I assure you, will tell in the course of a few years in labor. On the other hand if the barn is located above the cow stable and the straw and hay above it is pitched down a hay chute directly into the stable, the most of it about the center of the stable, the labor saved in doing chores is quite material. In arranging a cow stable to my mind there is only one way of arranging it and that is to have the cows stand in two rows opposite each other, their heads facing the outside, with a broad alleyway between so that you can drive through with the manure truck to get the manure out. If you want to build a barn wide enough, and make a driveway wide enough so that you could drive in front of the cows in the feeding alley, well and good. Then you could have the cows face the inside if you wanted to, but I think there are sufficient reasons against this so that I would not want to have them face the inside. But if you wanted the feeding alley wide enough so that you could drive through to feed silage crops, or anything of that sort, there is certainly no objection to this only the first cost. By having the barn wide enough for this you would certainly have more storage above. The storage capacity on our farm is a very important part of it.

HANDLING A SUMMER DAIRY.

To make a success of dairying in summer requires almost as much care and attention as to accomplish the same result during the winter.

Successful dairying always depends upon two great factors: the man and the herd.

You see, I have placed the man first. In this article, I shall presume the herd to be right and shall discuss the man with reference to some things that he must do if he handles a summer dairy successfully, especially during long, dry periods.

Some time ago, I visited a friend who supplies milk to a busy little city in a distant part of the upper peninsula. It was early in September. He was milking 28 cows, most of them grade Jerseys. They were averaging 20 pounds of milk per day and had eaten nothing but pas-

ture grass since May 15. But there are not many places in our state where pasture grass alone will sustain a cow during a long period without a material shrinkage in her flow of milk.

In portions of the state where the rainfall has been ample, pastures have been unusually good this season, but they are failing now and we are brought face to face with the old problem of finding something else for the cows to eat, or allowing them to dry up.

The man who would handle a dairy successfully during the summer must be ever on the alert. He must watch each individual cow. He must know when she is not getting enough to eat. He must know it as soon as the cow knows it and if he can find it out a little sooner, it will be all the better for him. It is this lack of foresight which meets us at every turn and foils our plans. We must know what the condition of the pasture is liable to be in the near future and must prepare for it.

There are early varieties of sweet corn which, if planted on the proper soil, will mature soon enough to furnish feed during the month of August, and the later sorts, like Stowell's evergreen will keep green until frost comes. If there are a few days when succulent crops are not available, recourse may be had to clover hay, which will help out very nicely. One can supplement short pastures to a great extent a grain ration.

The grain problem should be carefully studied, especially if the grain is to be bought. It is always a matter of economy to feed the cow the elements of food in proper balance, to secure these elements at the lowest price possible and to feed the cow liberally. Fresh pasture grass is rich in protein and if it is necessary to supplement it with grain the nutritive ratio may be wider than when other roughage is fed. Corn meal and bran mixed in equal parts by weight is an excellent feed at this time. Corn flake siftings, a by-product from the pure-food factories, will take the place of corn meal nicely, if the price is right.

When the grass becomes dry and scarce, the grain should contain more protein unless we supplement the roughage with something rich in this element.

Cottonseed meal, linseed meal, or gluten meal, will be found useful at this time. We can mix any of these with corn meal or corn flake feed, always mindful of the condition of the pasture and of the character of the additional roughage we are feeding.

In summer as in winter, we must not fail to watch each individual cow and feed her according to her performance. The difference between the successful dairyman and the man who fails is often merely the difference between the man who tries to feed the herd by some hard and fast rule laid down in a book, and gives the matter no further thought and the live man who knows his cows as individuals, lives close to them and gives them what science and common sense dictate that they should have.

Oceana Co.

W. F. TAYLOR.

GET FACTS ON SILOS.

Every progressive farmer in the United States is interested in silos and silage today.

The agricultural journals are full of it. They are telling about the economy and the profits of silo feeding. They are giving figures from farmers that can not be doubted. One authority reviewing the statements of farmers, said last week:

"I have no doubt that careful farmers can easily produce silage, figuring the cost on the market value of the corn if it had been harvested and sold, at \$2.50 per ton. At this rate it is one of the cheapest and best foods in connection with alfalfa or clover hay, that can be produced in the corn belt. Not only dairymen, but cattle and sheep feeders also will find in silage a cheap and satisfactory roughage."

When a great idea—like the silo—finally takes hold of the public, scores of opportunists looking for the profits in the tide of enthusiasm, jump into the field with so many claims that the prospective buyer is bewildered. There is so much science in the preservation of silage—so much depends on right material and right construction, that the intelligent farmer should take nobody's word until he has informed himself thoroughly. Every silo manufacturing company which advertises is glad to send free a booklet in which the silo and facts regarding ensilage are treated on. They contain much valuable information. Write to any silo advertiser in this paper.

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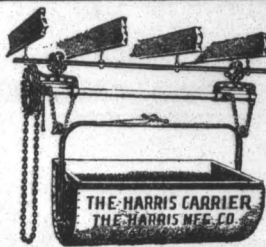
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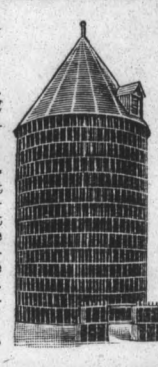
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LIVE STOCK

THE SMALL FARM FLOCK.

It is their ability to readily adapt themselves to general farm conditions that makes a well-bred flock of sheep an essential part of the live stock equipment of a well-managed diversified farm. A small flock will increase the value and productiveness of the farm without interfering with the general management, and at the same time afford a substantial increase to the annual income. The place sheep should occupy in the economical management of a farm depends on the general character of the soil, the rotation of crops and the adaption of the farm, location, buildings and equipment to certain branches of the sheep business.

On the farm that is well drained and has sufficient grazing land sheep will graze profitably. Thousands of farmers who follow no well defined line of live stock husbandry could make excellent profits from a flock of sheep either by keeping them as a primary interest or as a complement to other lines of live stock breeding and feeding. On many dairy farms a few sheep could find profitable grazing in pastures too scant to afford sufficient sustenance for dairy cattle. In this capacity a few sheep could be kept without interfering with the dairy business. Many farmers who lack adequate buildings and conveniences to make a success with dairy cows might make sheep husbandry pay good profits by going to a small expense to erect suitable sheds to house their sheep. Some of the most successful flock-owners have started with a small flock and very unpretentious buildings and equipment.

The most perplexing problem on hundreds of farms is to utilize the surplus grass, forage and fodder crops without purchasing large quantities of supplementary grain feeds. In a great measure a flock of mutton sheep will profitably turn all such crops into finished products. I know of many instances where dairy-men are keeping flocks of from 40 to 60

any one thing to discourage flock owners in America.

Weeds come to trouble pastures. In some instances they may be held in check by mowing; but under ordinary farm conditions they can best be held in check by letting a few sheep feed beside the cattle. Some farmers object to this, that the sheep pollute the grass so that the cattle will not eat it. This old superstition is very common, but like many other beliefs in regard to sheep is incorrect. The sheep having sharp noses and quick motions, eat the clovers and finer grass, leaving the coarser grasses for the cattle, so it is not wise to put more than one ewe with two cows, and that only for a few days at a time. In this way the sheep will aid in keeping down the weeds in the pasture and yield a greater profit for the feed consumed than the cattle could. This is a sort of pasture management that is not yet understood by farmers in America; but in it lies great profit and satisfaction in seeing pastures clean of weeds. Sheep love many kinds of troublesome weeds and will clean up pastures and at the same time pay us for the privilege.

The growing pest of weeds will force farmers to keep sheep. In no other way can weed growth be controlled so easily as by keeping a small flock of sheep on the farm. If the farmer has a small flock he can keep his pastures free from ragweed and other rank-growing weeds. The lambs that are to be fattened in the fall will glean the stubble and take care of the weeds. Many of them can be fattened in the corn field where they will clean out the weeds, eat the lower blades and consume the down ears, and that without a waste of grain. Much of their growth is clear profit and the farm is greatly improved by their having been there. It is the performance of scavenger service that commends sheep to many farmers. But this should not be the main object for their presence on a farm. Weed destruction is merely an incidental virtue.

The high cost of efficient farm labor is another point that adds to the value of sheep husbandry on the diversified farm. The sheep gather their own feed from seven to nine months in the year, ac-

knowledge by reading papers and books that discuss the subject intelligently. He should get his experience as cheaply as possible by studying his sheep, as he can by beginning in a small way because there are many things about sheep that cannot be learned by reading. If he is to be successful he must have his fields fenced sheep and dog tight. Otherwise he may just as well let the weeds grow and forego the profit.

New York.

W. MILTON KELLY.

EXPERIMENTS WITH HORSES.

During the years of 1909-10, experiments were conducted on four Danish farms for the purpose of determining the relative value of oats and Indian corn, of oats and mangels or rutabagas, and of whole and cut straw in feeding work horses of the Jutland breed. The main experiment period lasted, as a rule, from two to three months.

By substituting corn for oats two pounds of corn was found equal to two pounds of oats in the grain ration, and some straw was saved by making this change. When about four pounds of oats was replaced by roots in a ration of from 20 to 24 pounds of oats, two pounds of dry matter in the roots proved equal to two pounds of dry matter in the oats. Such a change in the ration did not apparently produce any injurious effects on the health or working capacity of the horses. Whole straw and cut straw were found to be of equal feeding value, weight for weight, in rations for horses at work.

G. E. M.

LIVE STOCK NOTES.

The arrival of close to 1,500 head of western grass-fed cattle in the Chicago stock yards recently marked the opening of the northwestern range cattle season in that market. Most of these cattle were dry weather refugees shipped to market prematurely on account of the long drought and scarcity of feed in Montana, whence most of them came. A few cattle of the same description have arrived in the same market from South Dakota, as well as from southern Montana, and they were mostly so thin in flesh that only a few cows were sold to killers, feeders taking the remainder of the offerings. Shippers accompanying these cattle to their point of destination have given a harrowing description of conditions as existing on the ranges, water having given out in many places while the pastures have been burned up by the heat, unrelieved by greatly needed rains. Cows and heifers have comprised the greater part of such consignments, although some steers and calves were also shipped in.

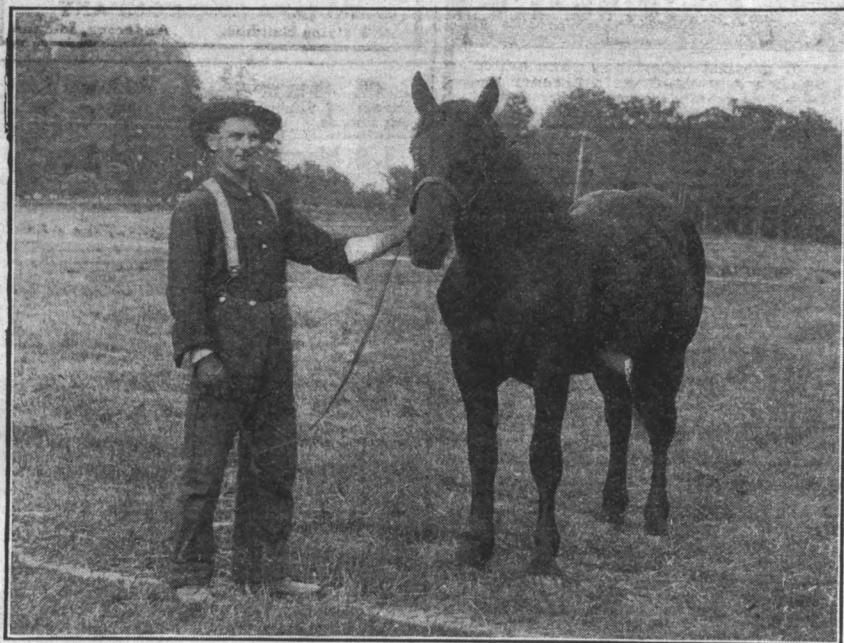
In a recent interview, James Brown, head cattle buyer in Chicago for Armour & Co., made the following statement: "I do not like the range cattle prospect. If I were addicted to forecasting, I would say that we will get few cattle and little beef. You will notice that usually about this time of the year we get a few early strings from Montana and South Dakota in splendid beef condition, and that before they show up we hear a lot of talk about how good they are. This year none of that heralding has been done, and I have a hunch that there is a reason. When the season is over it is very probable that it will be a disappointment both to shippers and killers."

John Beach, who at one time was a very extensive buyer of feeder lambs in Chicago and elsewhere for Michigan feeding, arrived there recently from his ranch of 4,200 acres in Osceola county, Mich., where he said grass and water were as abundant as he ever knew them to be at the midsummer period. Mr. Beach has been running about 250 head of young steers on his big ranch, and as he has room for more than 600 head, low prices have encouraged him to make further purchases. He said the value of land in northern Michigan for hay and grazing purposes is becoming more appreciated every year, and prices are advancing accordingly. Northern Michigan farmers have been rejoicing in a fine crop of clover hay, with every promise of an abundance of hay, as well as a good crop of hayseed later.

High-grade veal calves of light weight have been in good demand in the Chicago and other western markets for some time past, selling at a substantial premium over prices paid for heavy calves that tipped the scales at 200 to 300 lbs. The latter sell extremely low, some having sold as low as \$2.75 per 100 lbs. recently.

There is an excellent demand in the Chicago market for strictly high-class Holstein and Jersey milk cows for shipment to dairying sections, with scanty offerings, although plenty of common and medium to good milkers are offered all the time. Of late buyers have shown a marked partiality for backward springers of the better class, but most owners do not care to sell. There are occasional sales of prime cows at \$65 to \$75 per head and even higher.

The packers were considerably disappointed over the sudden curtailment of shipments of southern grass cattle to western markets following the recent general rains. Most of the fed Texas cattle have been marketed by this time, and the southwest is no longer long of cattle. The trouble in that region this summer has arisen from lack of feed and water.



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This good colt was raised by Mr. J. D. Longnecker, of Oceana county. The dam is a grade Percheron and the sire a full blood. The picture shows the colt as he appeared at the age of 12 months.

well-bred ewes without seriously interfering with their dairy work, thereby adding from two to three hundred dollars to their annual income. Experience indicates that we cannot safely conclude, if 40 or 60 ewes net us a profit of say \$5 a head per year that 80 to 100 ewes will do equally well, for with the increase in numbers there usually follows troubles and loss due to parasites and disease. It has always been my contention that a small flock of high-grade mutton sheep, well-handled and well-fed, would give relatively greater profits than any other kind of live stock.

On the average diversified farm there is sufficient rotation of crops to provide safe conditions under which to produce prime mutton. Mutton sheep thrive best in small flocks; they are not endowed with a trailing instinct like sheep of the Merino type. Years of liberal feeding and domestication have adapted them to the small farm and fresh grazing conditions; they thrive best in a rotation with plant crops. Crop rotation and change of pasture preclude the development of parasitic foes that have done more than

cording to the locality. They do not have to be soiled. The food which they eat does not need to be cut, ground or steamed at any season. Except at lambing time, they only require to be fed twice a day, and the work of feeding is relatively easy, because of its simplicity.

Success in sheep husbandry is a gradual growth. It is best to begin with a few sheep and build up the flock as the experience may suggest and the farm keep them. Success does not come to the man without experience who jumps into the business on a considerable scale. Such cases usually result in losses and disappointment that, following so soon after the flock is founded, cause the owner to give up his project. A few ewes being purchased, and the selection of the breed determined, procure the best ram that can be obtained, and you are ready to go into the business as it ought to be gone into. By the best ram, I do not mean a prize-winner, but a good, well-bred, typical representative of his breed. The beginner should realize that he has everything to learn about the business and should strive to gain his

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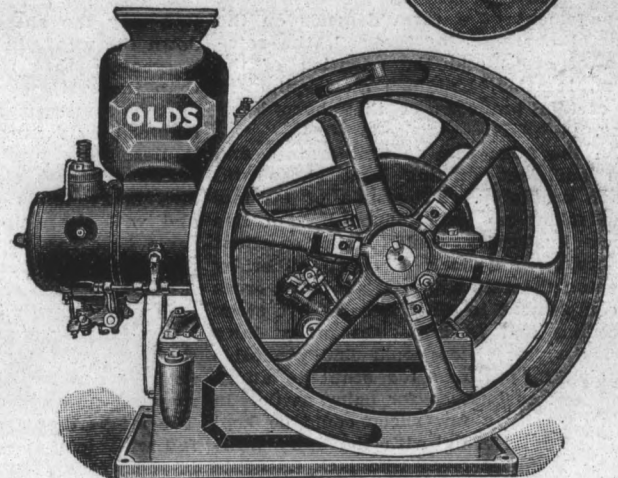
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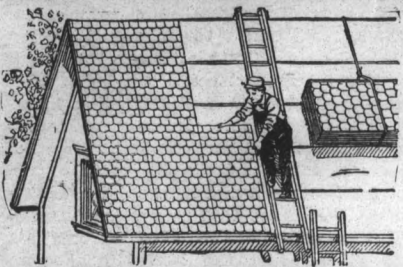
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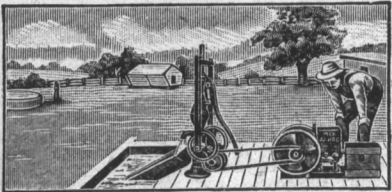
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POULTRY

THE COUNTRY'S ANNUAL EGG LOSS.

The bad egg, which term is meant to include every egg that for any reason is undesirable or unmarketable, is yearly receiving more attention from the pure-food experts of both state and nation, and its disposal is steadily becoming more and more difficult. However, the percentage of stale and practically unmarketable eggs among the receipts at all large markets this summer has been unusually high, and prices in consequence have shown a very wide spread.

In attempting to determine the percentage of loss suffered by the egg producers of the country through the marketing of undesirable eggs, the bureau of chemistry of the national department of agriculture has kept a record covering 258,996 dozens of eggs shipped into New York city from nine different states. The figures show that 3.48 per cent were rotten, 8.98 per cent were cracked, 10.15 per cent were stale and 12.58 per cent were dirty. New York's egg receipts average about 4,260,000 cases per year. Calculating on this basis, the government experts estimate that the unmarketable eggs going into New York city in one year aggregate nearly 4 $\frac{1}{2}$ million dozen. It would be impossible, of course, to keep a similar record of all eggs produced in this country, and in the absence of actual figures it would hardly be fair to assume that the percentage of bad eggs is equally high the country over. There is no question, however, that it is higher than it should be, and what the reduction of this percentage by one-half would mean to our egg producers may be judged from the statement that the government authorities estimate the country's annual production of eggs at 2 $\frac{1}{2}$ billion dozen, valued at nearly half a billion dollars.

Deliberate carelessness and neglect on the part of the producer and the local buyer are claimed to be the main factors in bringing about this annual loss, investigation showing that after eggs are gathered on the farm they are generally kept where the housewife can most conveniently get at them for household use, not where the temperature is low and the air fresh. Neither does the farmer have any regular time for taking eggs to market. In spring, when they are most plentiful and the market is falling, he is apt to go weekly. When hot weather comes on and the lay falls off he waits for a larger number, while the shrinking and incubation is going on rapidly. In autumn, with a still smaller lay and a rising market, the farmer holds his eggs for higher winter prices. The country merchant makes his profits on the merchandise taken in trade, not on the eggs, and he, too, is more apt to be careless of them while they are in his possession, storing them in hot or damp quarters and holding for high prices when production is low.

"COUNTING THE COST" IN POULTRY KEEPING.

There are a whole lot of poultry keepers who have but a vague idea as to the real cost of their flocks' keep. They don't figure. The wife sometimes thinks it is all "velvet." The husband of the same house often looks on his wife's determination to keep hens as a mild, but persistent form of insanity, to be endured only for the sake of peace in the family.

There is but one way to find out about the "profit and loss" in the case, and that is by finding out. Shut up in a suitably sized park or enclosure enough fowls to make a trial, with a place where they can only get such feed as you give them. Then feed for best results in egg production and figure for yourself the profit or loss.

One reason there is not a better knowledge of the cost, in the case of the farm flock, is that the flock has a free run and quite a large proportion of their "keep" they "rustle for" about the premises. This complicates the profit and loss problem and sometimes complicates the domestic problem.

Not nearly so much of the keep of an ordinary flock of hens is furnished by the waste and other means of food supply about the premises of the ordinary farm as it is credited with, especially when swine and other domestic animals are kept. However, it is well worth considering in connection with the farm fowl end of the business.

I have made an especial study of the

needs of the layer, the amount and kinds of food, and have "counted the cost." Some may be able to get more economical results. Some will say that the amount specified is starvation. Be that as it may, I have kept my flocks, and believe I can do so again, at the following cost for the laying varieties. Perhaps the "beef" varieties would cost more; however, it is not the purpose of this article to discuss that.

What a Flock of 100 Hens Should do Under Right Conditions.

Let us take 100 hens as a flock for basis of computation. I feed five quarts of corn, on an average, during the summer months and eight quarts during the winter months, per day. I feed two quarts of oats during the summer months, or three quarts of wheat, or four quarts of buckwheat or barley. It is well to alternate or, better still, to feed a mixture of all of these grains when available. The objection to mixed grains is that the feeder usually buys them already mixed, paying about three prices for them, and charges it against the flock. Buy your own grains at market prices and mix them yourself.

With the addition of about ten pounds per week of green ground bone, at an expense of 25 cents, five pounds of oyster shells, costing about five cents, and green stuff worth about ten cents, you will have a total cost of about two dollars per week for feeding the flock.

With anything but "bone-headed" treatment there should not be more than six weeks of the year when the 100 hens wouldn't produce more than this value in eggs—the rest is "velvet."

My estimate of the number of eggs 100 well-selected, properly-cared-for hens should lay would be 1,500 dozen for the year. At a fair market price, covering the average price for the past five years, the gross returns should be \$250. Subtracting \$100, the cost of their keep, would leave the tidy little sum of \$150, or \$1.50 per hen.

This is not a bad investment so far as interest on the investment goes—something like 200 to 300 per cent. Some of our oil and mining stocks, or even our automobile stocks, have nothing on this as an investment, and it has farm mortgages and government and municipal bonds beaten to a "frazzle."

These figures are conservative and apply to "park confined" layers. As these estimates are but a chapter from my own actual experience, anyone can do as well or better. In closing, I would make this positive statement: Except in the case of unavoidable misfortune, where a flock of properly selected hens have not paid out, the fault is with their keeper.

Isabella Co. Wm. J. COOPER.

CRATE FATTENING OF CHICKENS.

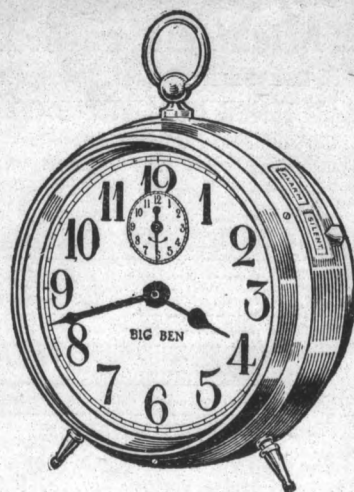
The farmer does not always get all the profit possible from his market poultry. A poor chicken is really sold at a loss to the producer, while there is generally a good profit in the fat one.

It has been found that chickens confined in crates or pens and properly fed take on flesh and fat very fast. The plump and fat fowl will sell to a select trade from the fact that it carries a large amount of flesh and that its flesh is tender and juicy.

Many firms, realizing the profit in fattening poultry for the market, buy large numbers of thin fowls and feed them for a few weeks before selling, thus making a good profit. Why shouldn't the farmer do the same? If he would only fatten his chickens before putting them on the market he would make this profit himself. The farmer can do this by confining the fowls and feeding liberally with fat-forming foods for a few weeks before marketing. Either old hens or younger fowls should be confined in coops or pens and fed heavily for two or three weeks. The confinement keeps them quiet and inactive so that no flesh is lost through exercise. During the first week of confinement the ration should be moderately light, but during the second and third week they should have all they will possibly eat. At the end of the third week they will begin to lose their appetites and at this time they should be sold.

The best feed for crate fattening poultry is ground grain moistened with milk, if milk can be secured for the purpose. Ground corn, or shorts, or bran, or all of them made into a soft mash with skim-milk or warm water, are good feeds for the purpose, and where they are available the grower of poultry, should never put a chicken upon the market until it is plump and fat.

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DETROIT, AUG. 12, 1911.

CURRENT COMMENT.

Now that the Canadian reciprocity Restrospective of the Reciprocity Issue. agreement has received the approval of congress and the signature of the President, a final word regarding the measure and its relation to the public welfare will not be out of place in our columns, which have been devoted to its determined opposition since the terms of the pact were announced. We believe that an unbiased retrospective view will convince any fair minded man that the pact did not win on its merits. The three principal factors which contributed to its successful passage were the one-sided application of the democratic principle of free trade, the selfish interest of the great newspaper organization of the country and the great administrative influence and power of the President exerted in its behalf. We feel certain that a great majority of those who voted for the pact believed it to be an injustice to the agriculturists of the country, but justified their action by the hope that it would prove a benefit to many of our manufacturers, railroads and merchants. But such a result, even if assured, could not justify the wrong done the farmers of the country, who are in every way as much entitled to protection as any business class or interest. Believing this pact to be a great injustice to and discrimination against the farmers of the country, and particularly of the border states, we were absolutely sincere in our opposition to it on these grounds, and we are able to see nothing in its future to change our opinion.

But while it is essentially unfair to the farmer, it is an accomplished fact so far as the approval of our government is concerned, although its final fate will not be known until after the Canadian election of this fall in which it will be made an issue. But in the probable event of its approval by the Canadian government, it will by no means spell ruin for the American farmer, who will apply himself with determination to the task of holding an advantage in our markets by excelling his Canadian competitors in the application of scientific methods and improved systems in the production and marketing of his crops. This experience will also have the effect of making the average farmer a deeper student of pub-

lic affairs, who will know how to protect his interests at the polls, the court of last resort in matters of public policy.

A new scheme has been Official Scoring put in operation this year in the state of Washington, where by farmers who so desire may have official authentication of the yield and quality of any particular crop by making application to the state experiment station. The scheme originated with the country life committee of the Spokane chamber of commerce, who interested Gov. Hay, of Washington, in the plan, with the result that a plan has been formulated which will be followed by the experiment station in the making of such tests. The purpose of such tests is declared to be: (a) to show the possibilities of agricultural production in any community, and the conditions essential to successful crop production; and, (b) to show the value of the crop thus officially tested for seed or propagation purposes. Briefly outlined, the plan of testing is as follows:

The location and area of crops for the testing of which application is made must be such that it will be possible to measure from it a rectangular tract of not less than the following area: For cereal crops, tested for either of the purposes mentioned, 20 acres; for forage crops, tested for yield, 10 acres; for fruit crops, tested either for yield or for propagation value, one acre. Upon application for tests, official supervisors of the tests to be made are designated by the departments of agriculture or horticulture, as the case may be, of the State College. When the findings of this supervisor have been approved by the director of the experiment station they constitute official authentication of the yield and quality of the crop. The expenses for testing are borne by the owner of the crop, and include traveling expenses and a per diem compensation for the supervisor during the time required for making the test. This supervisor measures the area to be tested and remains in charge of the crop until it is harvested and officially weighed and tested for quality. A score card is prepared by the college for the purpose of scoring all crops tested, which the supervisor is required to use in every case. The supervisor makes his report in triplicate, one copy of the report to be supplied the owner, one copy filed in the office of the experiment station and the third copy with the country life committee which originated the scheme. This report is to contain the following data: First, the owner's statement, including his name and address, the exact location of the tract, its cropping history for the preceding five years and an account of the method of preparation, seeding and cultivation of the crop, which statement is required to be made under oath. Second, the official supervisor's statement, which shall include the rainfall record for the locality, as recorded by the nearest weather observer, the variety of the crop, the measurement of the tract, the total weight of the crop harvested, the computed yield per acre and the official score of the quality of the product, accompanied by a score card completely filled out, sworn to by the supervisor and approved by the director of the experiment station. To insure uniformity in these reports blank forms will be provided as designated by the director of the experiment station.

It is claimed by those who are enthusiastic regarding the possibilities of this plan that as great benefits will accrue from it as from the official testing of the cows in a dairy herd. While that is probably an extreme view, yet there is no doubt that valuable data will thus be collected from which important facts may be deduced regarding the adaptability of certain types of soils and certain methods of growing crops which will be of general value to the farmers of the state. The plan should also result in the use of better seed, as there would undoubtedly be a general desire on the part of enterprising farmers to get seed from the best yielding fields, especially if the product scored high as to quality. At any rate, this experiment is worthy of general interest and observation, as it is a new field for the application of scientific and exact methods to agricultural production, and we believe that the result will be watched with interest by the farmers of the entire country.

The last argument The Last "Shot" At to be presented in the United States Senate on the Canadian Reciprocity bill before its final passage was made by Senator William Alden

Smith, of Michigan, who also made one of the first speeches against the bill after it was reported to the Senate. His last speech was a most comprehensive and able argument against the measure, containing a mass of statistical information bearing on the problem and quoting liberally from the utterances of many of the country's wisest statesmen relating to similar propositions which were under consideration in years gone by. We regret that lack of available space makes it impossible to publish Senator Smith's speech in full and that we shall have to be content with summarizing its more important argumentative features and quoting briefly from some of its passages relating specifically to our agriculture.

At an early point in his address Senator Smith commented upon the potency of the magic word "Reciprocity," and reviewed the history of its application to our problems of state. Regarding our previous treaty with Canada and the later and more practical application of the principle of true reciprocity in our relations with many nations, he said:

In 1844 the German reciprocity treaty was made with us, but failed of confirmation in the Senate. Rufus Choate declared it to be outside the powers of the President, and unhesitatingly said that it would be of no commercial advantage to our country, while Daniel Webster declared that "the principle of reciprocity acted upon by the Government is wrong, a mistake from the beginning, and injurious to the great interests of the country." The attention of the United States was then turned to the desirability of a trade treaty with Canada, and, after much fencing for advantage, such an arrangement was entered into in 1854 for the period of ten years, resulting in political hostilities and commercial misunderstandings and the sacrifice of revenue, which the rising tide of American antagonism completely engulfed during the administration of President Lincoln. Free trade in spots had been the prevailing mania of some American politicians and statesmen. The administration of Mr. Buchanan endeavored in every possible way to make an arrangement of this kind with Mexico which would have been only reciprocal in the natural products of the two countries, but our unfortunate experience with Canada at that time destroyed interest in the Senate in this free-trade spirit, while all the treaties of reciprocity entered into by European governments gradually partook of the form now known as the favored-nation clause, so common in the commercial treaties of all the governments of the world.

These were based upon the principle that no concessions should be granted which did not exact a similar concession in return, and the countries now outside the purview of this arrangement are few indeed, and America is no exception to the rule. Indeed, every commercial treaty made by this Government now embraces this wholesome and salutary provision, so that it may be said today, in truth, that a form of helpful and wholesome reciprocity is already in existence in such form as creates no animosity, leads to no misunderstandings, and does not operate to the disadvantage of any class of our own people.

Proceeding with the train of his argument, Senator Smith reviewed the history of the negotiation of the former reciprocity treaty with Canada and commented upon the enthusiasm with which it was hailed, which enthusiasm, however, waned under the practical working of the treaty until, after a period of ten years the treaty was abrogated by our government. Statistics were presented to show how the balance of trade turned against the United States under this treaty and how the revenues resulting from Canadian trade were reduced. Reference was also made to the frequent attempts on the part of Canada to consummate a similar agreement, since the abrogation of the treaty of 1854, to prove Senator Smith's contention that there has never been an hour since that time when a similar agreement could not have been consummated "had any great party or any influential American statesman seen anything of merit in it." Senator Smith also commented at some length on the crystallization of English sentiment for a confederation of her dependencies in both hemispheres, which prospect of an even closer political alliance between Canada and the mother country, he believes to be the greatest barrier to any possible beneficial results to our country from an agreement of this character. In this connection the Senator pointed to the conclusion that this agreement was designed to be a mere temporary convenience to the farmers of Canada, or, in the words of the Canadian Minister of Finance who negotiated the agreement, "a day to day helpmeet." He also pointed out the apparent fact that it is no part of the Canadian plan to permit us to utilize her raw materials for the extension of our manufacturing industries, nor to subordinate their commercial activities to our leadership or control, and that even in the event of a fur-

ther enlargement of trade relations with Canada there is plenty of available British capital for Canadian exploitation and to "prey upon our commerce from the golden borderland of her favored dependency, extending 4,000 miles along our frontier, from ocean to ocean."

Thus Senator Smith attempted to show that this agreement could not be of ultimate benefit to our manufacturing interests or to our labor. In closing his argument he made an eloquent plea for the conservation of the interests of the American farmers and sounded a warning note to the effect that "American manufacturers will not be able to increase their sales when the agricultural communities of our own country are subjected to keen competition in markets whose purchasing power has been reduced by inability to dispose of their products at good prices at home." We quote from the closing passages of his speech as follows:

The treaty of 1854, made by Democrats and free traders, was exactly similar in character, as stated over and over again by Mr. Fielding in the Canadian Parliament. Great results were predicted to follow by its authors. But in actual practice the best results moved northward to our neighbors, while in the arrangement made then and the agreement now before us there can not be found an exclusive American privilege.

Must the American farmer again compete with the Canadian rival on equal terms? His lands cost more, his taxes are higher, he must defend his own country by land and by sea, with no indulgent mother to watch over him by night and protect him by day. Shall we then "throw down the barriers and whip these two runners into competition, one heavily weighted, the other without an ounce of runner's ballast"? Sir, it does not require great wisdom to foretell the result of such an unequal contest. The tide of immigration will turn abruptly into Canada, while a general outcry is certain to be raised against the protective system, to which we owe our industrial supremacy, calculated to give encouragement to the free-trade party North and South. In such a controversy, with the House of Representatives now Democratic, so-called reciprocity may stand, but protection will fall. It is not necessary to sever the jugular vein of the body politic—one in this presence has undertaken to do so now—but cut the smallest artery at the wrist or thigh and the result will be the same, although the agony may be prolonged.

Under the Elgin treaty Canada wanted a market for her agricultural products; today she is in a similar need; 54 per cent of the products of their farms is surplus, with no untaxed market in which to sell, and we are asked to ignore the pleadings of our own countrymen and extend this favor to aliens without recompense.

The surplus agricultural products of Canada are piled mountain high on every acre of her cultivated soil, and it is to move this tremendous crop, now ripening in the fields and peacefully reposing in the storehouses and granaries in every Province of her territory, that she makes the sacrifice necessary to its profitable and immediate conversion into American money, and the Senate is, I fear, about to place the stamp of its approval upon an arrangement so unfair and unjust to the tillers of our own fields. In my judgment, this unfortunate concession is literally steeped in rancor and ruin, and in its ultimate consequences will make less remunerative and less attractive the vocation of the American husbandman. It was neither necessary nor desirable. Our trade with Canada over the high wall of protection on the same terms as with England and France and Germany has yielded a net return far in excess of anything that can possibly come to us as a result of this new device, and it is, indeed, scanty reward for the faithfulness and the constancy of the American farmer, whose devotion to his country on the field of battle and in the forum is one of the proudest boasts of our national life. Sir, this will shake his faith in the just leadership of men, and in the heat and burden of the day he will ponder over this inglorious surrender to his rivals and judge with sharper scrutiny the hidden motive for your course. And even if we who oppose you are wrong in our belief we shall at least feel some compensation for our course in braving the rising tide of public criticism and the disapproval of our temporary leaders in the unselfish solicitude we feel for the joint welfare of our citizens, producers and consumers alike.

HAPPENINGS OF THE WEEK.

Foreign.

A test vote in the British house of commons showed that body to be supporting the veto bill and the government by the safe majority of 119, the vote standing 365 and 246. The vote was taken on a motion to censure the government for having obtained from King George a pledge that he would create, if necessary, sufficient peers to pass the veto bill in the house of lords.

A vote of striking miners of eastern British Columbia showed 90 per cent of them unfavorable to the majority report of the conciliation board and ready to continue the strike.

The sub-committee on international economic and financial relations report to the division of economics and history of the Carnegie endowment for international peace in favor of developing a great economic world society as a preventive of war.

Thousands of railwaymen have quit work at Liverpool and Manchester demanding higher wages and shorter hours.

English shipbuilders have contracted (Continued on page 123.)

FARMERS' CLUBS

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—B. A. Holden, Wixom.
Vice-Pres., J. D. Leland, Corunna.
Secretary—Mrs. C. P. Johnson, Metamora.

Treasurer—Mrs. Lewis Sackett, Eckford.
Directors—A. R. Palmer, Jackson; Wm. H. Marks, Fair Haven; C. L. Wright, Caro; E. W. Woodruff, Blanchard; C. P. Johnson, Metamora; Patrick Hankerd, Munith.

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.

CLUB PICNICS.

The Odessa Farmers' Club will hold the regular annual picnic August 19, in the grove at Lake Odessa.

The 13th annual picnic of the Wise Farmers' Club will be held Wednesday, August 16th, at River Side Park, three miles east and one-half mile north of Clare and one and one-half miles north of Herrick. Good speakers will be in attendance. Everyone who attends is sure to have a good time.

COMPULSORY SPRAYING.

Address of Mr. D. Munro, before the State Association of Farmers' Clubs at the last annual meeting of that organization.

(Continued from last week.)

Oregon: "We have county inspectors. There are now county inspectors in most of the counties of the state. The law is well enforced in those counties in which fruit growing is an important industry. In other counties it is not so easy to secure effective enforcement of the laws by reason of the lack of local interest, and the desire to avoid expense. Prior to 1900 there was a steady decline in the value of the fruit crop of Oregon. This condition was due to the tremendous increase of insect pests and fungus diseases and a lack of knowledge or incentive to fight them. There was an over-supply of fruit for home use and the condition of the fruit prevented its being marketed abroad, hence the industry languished. Since the year 1900 the value of the crop has grown from \$1,300,000 to over \$4,000,000 annually. Without the machinery of the state board of Horticulture it would have been impossible to have accomplished this. Without a high standard, and the means of attaining, and enforcing such a standard, it would be impossible to reach outside markets. As it is now a very large percent of the crop goes outside the State, bringing absolutely new money in return. Oregon apples and pears are now unquestionably the most famous in the world, and it must be our constant aim to keep them so, that we may continue to find remunerative markets for the vastly increased crops of the future. Since the addition of the county inspectors to our force, the scope of the work has been enlarged and the duties of the commissioners have changed somewhat. The county inspectors are paid by the counties, but work under the district supervision of their respective commissioners. The commissioners are kept busy training and drilling the inspectors in their work traveling here and there to attend meetings or to settle appeals in disputed cases, to gather information and statistics and to look after the inspection of nurseries. The field of work is so vast that the only limit is the time and money available.

"The commissioner at large is directed by law to visit annually each of the fruit growing districts of the state. With the funds available this is manifestly impossible, but I have endeavored to visit just as many as possible, the more important ones of course first. A larger appropriation is asked. The appropriation has never been increased while the work has increased four fold. The state is divided into five districts with a commissioner in each, and the commissioner-at-large. These as well as the county inspectors. The last legislature passed a law compelling the branding all packages of fruit offered for sale with the grower's and packer's name and address. This will prevent any stealing of one community's reputation by another, and will render it very easy for inspectors to trace diseased, wormy or scaly fruit to its source. It is a good law and must be strictly enforced.

(Continued next week.)

GRANGE

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

TWO COUNTRY LIFE CONFERENCES—I.

It has been my privilege recently to attend two conferences designed to promote country community building. Of these, one was in Illinois and the other in Virginia. In both I looked on through glasses colored by the Grange. I should like to share a few observations and impressions, thus seen, with my co-workers in Michigan.

The Illinois meeting was the first annual conference of the Illinois Federation for Country Life Progress. It was held at Normal University during the session of the summer school and was attended by some eight or nine hundred people, most of whom teach in rural or village schools. This federation is an organization of organizations, formed last winter by 100 representatives of 30 country societies. As I recall it, 12 of these delegates were sent by Granges and the others by country schools, rural churches, horticultural societies, farmers' institutes and clubs. Its purposes pertain for rural progress; to get all rural forces to working harmoniously together; to stimulate farm leadership; to study farm life conditions, and to foster the upbuilding of local communities. This last "is the key-note and special purpose of the organization."

The president of this federation is a "real" farmer, actively identified with farmers' institutes and with the development of his own community's welfare. I judged him to be a man of broad-gauged mind and heart, a hopeful, charitable, sensible leader among men. The program was made up of two chief parts. The first consisted of concrete examples of what had already been done in individual neighborhoods; the second part,

of concrete things that need doing. One rural teacher reported that his school had, in one way and another, secured the presence at the school and grounds of 1,000 patrons the first year, 2,500 the second, and 3,000 the third. One farmer told how his community was built up through road improvement; another, through farmers' clubs; another local institutes; and a pastor told of the marvelous development of his country neighborhood through the church acting as a socializing agency. One woman told of the effect of domestic science clubs, and another of what the Grange is doing for her community as a whole.

At the closing hour calls were made for and received from those who would attempt one improvement in his community life during the coming year. Among the definite things thus promised to be undertaken were: A campaign for dragging roads; betterment of the interior of a schoolhouse; improvement of a school yard; organization of a farmers' institute, club, or Grange; formation of a domestic science club; campaign for school consolidation; and the forming of a country life club by getting all community forces together in a local federation.

The Grange in its aims stands shoulder to shoulder with all such movements as this. In many instances a local Grange has actually been the animating source of a strong community spirit which has worked out practical results for the entire neighborhood. In too many places, however, it still stands by itself, good so far as it goes, but lacking vision of its possibilities. Such meetings as this conference brings such visions; therefore it is well for the Grange to take the initiative in bringing about such conferences of local forces—school, church, club and Grange—all, in a council upon the common good of the community as a community.

JENNIE BUELL.

COMING EVENTS.

Kent Co. farmers' annual picnic, at John Ball park, Wednesday, Aug. 16. Former State Master Horton, state speaker.

Bring Up That Rich Farm Beneath Your Land!

"The Spalding Deep Tilling Machine makes a perfect seed bed that cannot be procured with any other machine or combination of machines on earth today. I have renewed my farm and have today the best crop of wheat in this neighborhood, and I believe the best crop of wheat ever grown here."

(Signed) P. B. CRANE, Long Lake, Minn.

DEEP TILLAGE is one of the liveliest subjects of the day with progressive farmers. Since the Spalding Deep Tilling Machine has completely solved the problem, you hear deep tillage everywhere. You will soon see it everywhere.

Bring up your brand new farm from the virgin subsoil! Conserve the priceless moisture! You can now do it. The old-fashioned expensive methods that didn't do the work, are now a thing of the past. The Spalding Deep Tilling Machine makes deep tilling easy, and brings it within reach of every farmer. It opens up a new treasure of farm profits—for there is such a treasure under every farm. We want you to know all about this remarkable deep tiller—

The Spalding Deep Tilling Machine

It has now been in successful use for three years by leading farmers in all parts of the country. We want you to know how thoroughly it pulverizes the soil—properly prepares the seed bed 12 to 16 inches or more—doubles and even triples crops in many cases—protects you against drought by conserving the moisture—cuts the roots and covers the weeds and brush so deep they won't come to life again.

L. E. Holden writes: "My experience is that by underdraining and the use of the Spalding Deep Tilling Machine, and by proper selection of seeds and fertilization, we have increased the products of Good Hope Farm three-fold."

The Spalding Deep Tilling Machine alone pulverizes the soil deep enough to bring up the virgin subsoil with all the big crops and big profits it holds for you. No plow or combination of plowing and subsoiling has ever been able to do this.



Spalding Deep Tilling Machine tilling 18 inches deep and thoroughly pulverizing the soil—bringing up "new farm" and preparing a real seed bed. Note the clean cut, deep furrow without any furrow slice. Send for Free Catalog.

The Spalding Deep Tilling Machine positively pulverizes the soil to a depth of 12 to 16 inches or more, so that it conserves the moisture for months. It prevents the ruin of land by erosion. Hundreds of thousands of acres are being saved by the Spalding Deep Tilling Machine because it puts the land in condition to absorb and hold the moisture and thus stops flooding and the forming of gullies.

The Spalding Deep Tilling Machine saves time. It saves labor. It makes unnecessary a large amount of harrow work, disking, dragging, etc. But best of all, it gives you the properly prepared seed bed that raises the bumper crops.

Investigate. Write to us for free books today.

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(Established 1853) Makers of Farm Implements Albion, Michigan, U. S. A.

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can be harvested promptly before fall rains discolor and ruin them, by owning a GENUINE PATENT

Miller Bean Harvester

(Made by LeRoy Plow Co., LeRoy, N. Y.) that costs no more than imitations. If your dealer can not supply you write the

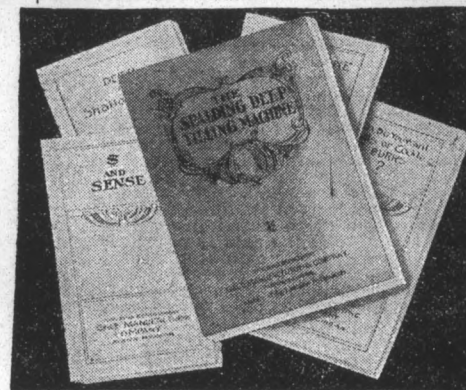
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Agricultural Expert's Opinion

Long Lake, Minn., June 17, 1911.

Spalding Department, Gale Mfg. Co.

I give you herewith my experience in eradicating quack grass. I took a field that was badly infected with quack grass and plowed it in August, 1910, with a Spalding Deep Tilling Machine. In about two weeks I double-disked it thoroughly. I gave it three such diskings during the fall. This spring I harrowed it and seeded it to wheat. Not a spear of quack grass can be found on the field today. The prospects now are for 30 bushels to the acre. The Spalding Machine will save 50 per cent of the labor in eradicating quack grass. The Spalding Deep Tilling Machine makes a perfect seed bed that cannot be procured with any other machine or combination of machines on earth today.

(Signed) P. B. CRANE.

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Tear out and write your name on this Free Booklet Coupon and mail it to us today. Or use postal or letter if you prefer to tell us your soil conditions and problems. Let us be of every help to you. Be sure to answer today in your own profitable interest. Get all the facts now. (3)

MARKETS

DETROIT WHOLESALE MARKET.

August 9, 1911.

Grains and Seeds.

Wheat.—Farmers continue to rush their wheat to the markets so that on top of the 7,000,000 increase in the visible supply a week ago there is an additional increase of over 4,000,000 bushels, yet in spite of this heavy selling the market keeps going up on news of heavy damage to the Canadian crop by black rust, shortage in the Russian yield and general bullish news from other European countries. The black rust news has really occupied the center of the page and been the main factor in working advances which were twice as large for September and December wheat as for cash goods. On Tuesday there was a reaction due to profit taking by heavy holders; the news, however, continued bullish and a rally following the selling recovered to the market about half of the decline. Flour is improving in demand. One year ago the price for No. 2 red wheat was \$1.02 3/4 per bu. Quotations for the past week are:

	No. 2	No. 1	Sept.	Dec.
Thursday	89 1/2	86 1/2	89 1/2	91 1/2
Friday	90 1/2	87 1/2	90 1/2	92 1/2
Saturday	90	87	92	96 1/2
Monday	90 1/2	87 1/2	93	97 1/2
Tuesday	90 1/2	87 1/2	92 1/2	97 1/2
Wednesday	90 1/2	87 1/2	92 1/2	97 1/2

Corn.—The past week weather has been favorable to the proper development of the corn plant and the market has not improved under the influence of advancing weather prevailed. Prices are a fraction higher and the market seems steady. One year ago the price for No. 3 corn was one-half cent below the price today. Quotations for the past week are:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	67	68
Friday	67	68
Saturday	67	68
Monday	67	68
Tuesday	67	68
Wednesday	67	68

Oats.—This trade has advanced more than corn, but not so much as it would have delivered less plentiful from farmers. In Michigan threshing yields are a little disappointing, farmers not realizing what they had expected. The price for standard oats a year ago was 37 1/2 c per bu. or about five cents below the present basis. Quotations for the past week are:

	Standard	No. 3
		White.
Thursday	41 1/2	41
Friday	42	41 1/2
Saturday	42 1/2	42
Monday	42 1/2	42
Tuesday	42 1/2	42
Wednesday	43	42 1/2

Beans.—While there appears to be a fairly good stand of beans in the bean growing counties of the state the critical period of their development is not passed and dealers are in no position to judge what the yield might be until after the pods are filled. Dry weather at this time would ruin the crop and in some sections immediate rains are needed to save it. Nearby deals slumped eight cents Tuesday while October delivery advanced two cents on the same day. A year ago cash beans were selling at \$2.32 and October at \$2.10. Quotations for the past week are:

	Prompt	Oct.
Thursday	\$2.28	\$2.08
Friday	2.28	2.08
Saturday	2.28	2.08
Monday	2.28	2.08
Tuesday	2.20	2.10
Wednesday	2.25	2.15

Cloverseed.—As the time approaches for the hulling of June and mammoth seed it becomes more and more apparent that there will be a very small crop because of the small acreage and light yields. The heads are not filling properly and the fields are not heading up as they should. Seed is therefore advancing and the price for these kinds now rule more than three dollars above the figures of a year ago. Alsike on the other hand is proving a fair yield and the price has dropped 50 cents since last Thursday. Quotations for the week are:

	Spot.	Oct.	Alsike.
Thursday	\$11.00	\$11.00	\$9.75
Friday	11.00	11.00	9.75
Saturday	11.00	11.00	9.50
Monday	11.25	11.25	9.50
Tuesday	11.25	11.25	9.25
Wednesday	11.25	11.25	9.25

Rye.—No 1 is quoted at 85 c per bu., which is a 6c advance over last week's quotation.

Visible Supply of Grain.

	This week.	Last week
Wheat	45,881,000	41,316,000
Corn	6,005,000	8,201,000
Oats	13,000,000	11,203,000
Rye	22,000	14,000
Barley	669,000	714,000

Flour, Feed, Provisions, Etc.

Flour.—Market is active with prices unchanged. Quotations are:

Clear	\$4.00
Straight	4.25
Patent Michigan	4.75
Ordinary Patent	4.50

Feed.—Prices rule about steady. Carlot prices on track are: Bran, \$25 per ton; coarse middlings, \$24; fine middlings, \$27; cracked corn, \$23; coarse corn meal, \$23; corn and oat chop, \$26 per ton.

Hay and Straw.—Both hay and straw values are off from \$16 to \$2 per ton. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$19; No. 2 timothy, \$18; clover, mixed, \$16 to \$17; rye straw, \$7.50; wheat and oat straw, \$6.50 per ton.

Potatoes.—Nothing new has developed in the potato situation and prices are steady. Quoted at \$1.60 to \$1.75 per bu.

Provisions.—Family pork, \$18 to \$19, mess pork, \$17; medium clear, \$16.50 to \$17.50; smoked hams, 16c; briskets, 10 1/2 c

11 1/2 c; shoulders, 10 1/2 c; picnic hams, 10c; bacon, 14 to 16c; pure lard in tierces, 9 1/2 c; kettle rendered lard, 10 1/2 c per lb.

Dairy and Poultry Products.

Butter.—The trade is steady at the quotations published a week ago. The output is decreasing. All markets show a firm tone and declines are not anticipated. Quotations are: Extra creamery 26c; firsts do, 25c; dairy, 18c; packing stock, 17c per lb.

Eggs.—There is a good demand for all the eggs that come in and more would be used if they were available. This condition has warranted an advance with the trade steady at the new figure. Fresh receipts, case count, cases included, are now quoted at 15 1/2 c per doz. This price is one cent above the figure of last week and two cents below the quotation on this date a year ago.

Poultry.—Prices are the same except for a decline of one cent in the quotation for broilers. Prices are: Live—Hens, 12 1/2 to 13c; old roosters, 9c; turkeys, 14 to 15c; geese, 8 to 9c; ducks, 12 to 13c; broilers, 15 to 16c per lb.

Cheese.—Michigan, old, 17c; Michigan, late, 13 1/2 to 15c; York state, new, 14 to 15c; Swiss, domestic block, 19 to 21c; cream brick, 14 to 15c.

Veal.—Market steady at last week's figures. Fancy, 10 1/2 to 11c; choice, 8 to 9c per lb.

Fruits and Vegetables.

Cabbage.—Steady. Selling at \$2.75 per bbl. for home-grown.

Plums.—Per bu., \$1.50.

Peaches.—Michigan grown, \$1.50 per bu.

Blackberries.—\$1.50 to \$1.75 per 16-qt. case.

Huckleberries.—In light supply and steady. Quoted at \$3 to \$3.50 per bu.

Apples.—Supply is ample for present needs and prices are lower. New Michigan grown are quoted at 50 to 75c per bu.

OTHER MARKETS.

Grand Rapids.

Potatoes are lower, though they are still bringing good prices for this time of year, ranging from \$1.25 to \$1.50 per bu. Prices on Tuesday morning's city market were as follows: Radishes 5c; onions 10c; cucumbers 15 to 30c; head lettuce 60c; leaf lettuce 50c; beets 10c; cauliflower 10c; celery 10 to 15c; tomatoes 2c; carrots 3 bunches for 25c; cabbage 80c to \$1; string beans 1.25; corn 12c; egg plant 15 to 20c; green peppers 25c doz.; egg plant 15 to 20c; muskmelons \$2.50 to 2.75 per crate. Prices for fruit were as follows: Apples 60c to \$1; 25c per bu.; hand-picked apples 60c to \$1; plums 1.50 to \$2; blackberries 1.60; pears \$2.75; peaches \$3. Butter and eggs unchanged. Dressed hogs are worth 8 1/2 c. The mills are paying 83c for No. 2 red wheat and 37c for oats.

Chicago.

Wheat.—No. 2 red, 89 1/2 to 90c; Sept. 92 1/2 c; Dec. 97 1/2 c per bu.
Corn.—No. 2, 64 1/2 to 64 3/4 c; Sept. 64 1/2 c; Dec. 62 1/2 c per bu.
Oats.—No. 2 white, 40 1/4 to 40 3/4 c; Sept. 41 1/4 c; Dec. 44c.

Barley.—Malting grades, 90c to \$1.13 per bu.; feeding 60 to 80c.

Butter.—Last week's advanced quotations rule, although trade continues quiet with the market barely steady. Quotations: Creameries, 21 to 26c; dairies, 19 to 23c per lb.

Eggs.—Good stock is still in light supply and the select grades have advanced 1/4 c. The quality of miscellaneous receipts shows some improvement and the minimum figure now offered for this grade is 10c, an advance of 4c since last week. Quotations: Prime firsts, 17 1/2 c; firsts, 16c; at mark, cases included, 10 to 14c per dozen.

Potatoes.—The heavy receipts of the past two weeks have developed a weak undertone in this market. The offerings are largely Jerseys and Minnesotas, with buyers showing a preference for the latter. Jerseys are quoted at \$1.25 to \$1.30 per bu.; Minnesotas, \$1.10 to \$1.15.

Beans.—Market very firm; quotations unchanged. Choice hand-picked pea beans are quoted at \$2.33 to \$2.38 per bu.; prime, \$2.10 to \$2.20; red kidneys, \$3.50 to \$3.85 per bu.

Hay and Straw.—In a general way this market is easier but, with a few exceptions, prices remain unchanged. Clover hay is materially higher. Oat straw is quoted higher while wheat and rye straw are lower. Quotations: Choice timothy, \$26 to \$27; No. 1 timothy, \$24.50 to \$25.50; No. 2 do., \$22 to \$23; No. 3 do., \$18 to \$20; No. 1 clover mixed, \$19 to \$22; No. 2 do and no grade, \$5 to \$12; clover, \$10 to \$15; rye straw, \$7.50 to \$8.50; oat straw, \$7 to \$7.50; wheat straw, \$5.50 to \$6 per ton.

New York.

Butter.—Market steady to firm with last week's advanced figures ruling. Creamery specials are quoted at 27c; extras, 26c; firsts, 23 1/2 to 24 1/2 c; seconds, 21 1/2 to 23c; thirds, 20 to 20 1/2 c.

Eggs.—Prices a shade lower, the under grades declining most. Market steady. Fresh gathered extras, 22 to 24c; firsts, 17 to 18c; seconds, 16c; western gathered whites, 19 to 23c per dozen.

Poultry.—Dressed—Firm; fowls and broilers quoted about 1c higher. Turkeys, 12 to 15c; fowls, 11 to 16c; western broilers, 14 to 17c.

Boston.

Wool.—The improvement in the business of wool manufacturers has resulted in a movement of wools from the bins. The increased probability that Congress will not agree upon a basis for revising Schedule K, has given dealers a chance to breathe and allow them to turn their attention to business. Following are the leading domestic quotations for fleeces: Ohio and Pennsylvania fleeces—Delaine washed, 30 to 31c; XX, 28 to 29c; 1/4-blood combed, 25 to 26c; 3/4-blood combed, 25 to 26c; 1/4-blood, 24 to 25c; 1/2, 3/4 and 1/4 clothing, 22 to 23c; delaine unwashed, 24 1/2 to 25c; fine unwashed, 21 to 22c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 19 to 21c; delaine unwashed, 23 to 24c; 1/4-blood unwashed, 25 to 25 1/2 c; 3/4-blood, 25 to 25 1/2 c; 1/4-blood, 24 to 24 1/2 c; 1/2 and 3/4 clothing, 21 to 22c. Kentucky,

Indiana and Missouri—1/4-blood, 25 to 26c; 1/4-blood, 24 to 25c; Georgia, 21 to 22c.

Elgin.

Butter.—Market firm at 26c per lb., which is last week's quotation. Output for the week, 916,200 lbs., as compared with 933,700 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

August 7, 1911.

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

Receipts of stock here today as follows: Cattle 185 cars; hogs, 60 double-decks; sheep and lambs 32 double-decks; calves 1,700 head.

With 185 cars of cattle on our market here today, and 24,000 reported in Chicago, our market ruled strong to ten cents higher on all good grades of cattle; all other grades steady to 10 cents lower.

We quote: Best 1,400 to 1,600-lb. steers \$6.75 to \$7.25; good prime 1,300 to 1,400-lb. steers \$6.50 to \$7.00; good prime 1,200 to 1,300-lb. steers \$6.25 to \$6.65; best 1,100 to 1,200-lb. shipping steers \$5.65 to \$6.25; medium butcher steers 1,000 to 1,100-lb. \$5.25 to \$5.75; light butcher steers \$4.75 to \$5.25; best fat cows \$4.75 to \$5.25; fair to good do. \$3.50 to \$4.25; common to medium do. \$2.75 to \$3.25; trimmers \$1.75 to \$2.75; Best fat heifers \$5.75 to \$6.00; good fat heifers \$5.00 to \$5.40; fair to good do. \$4.25 to \$4.85; stock heifers \$3.25 to \$3.50; best feeding steers, dehorned \$4.25 to \$4.50; common feeding steers dehorned \$3.25 to \$3.50; best butcher and export bulls \$4.50 to \$5.00; bologna bulls \$3.50 to \$4.00; stock bulls \$3.00 to \$3.25; best milkers and springers \$5.00 to \$5.00; common to good \$2.00 to \$3.00.

The best milkers and springers were about steady with last week; common kind still hard to sell at satisfactory prices.

Today's hog market ruled active, with the bulk of the yorkers, mixed and medium weights going at \$7.90, with a few selected yorkers at \$7.95. Heavier grades ranged from \$7.60 to \$7.85 according to quality. Pigs sold generally \$7.85 to \$7.90. Roughs from \$6.65 to \$6.75. Stags \$5.00 to \$5.50. Everything cleaned up, market closing firm, and indications look favorable for the near future.

The sheep and lamb market was active today; most of the choice lambs sold for \$6.50; few fancy \$6.75. Wethers \$3.85 to \$4.00. Look for steady prices the balance of the week.

We quote: Best spring lambs \$6.50 to \$6.75; wethers \$3.85 to \$4.00; cull sheep \$1.50 to \$2.50; bucks \$2.50 to \$2.75; yearling lambs \$4.50 to \$5.00; handy ewes \$3.25 to \$3.50; heavy ewes \$3.15 to \$3.25; veals, choice to extra \$8.50 to \$8.75; fair to good do. \$7.00 to \$7.75; heavy calves \$3.25 to \$4.50.

Chicago.

August 7, 1911.

Received today 24,000 35,000 23,000
Same day last year, 24,437 22,214 23,091
Received last week, 59,081 117,184 89,376
Same week last year, 50,184 92,916 96,603

There was an excellent demand for fat cattle today, with prices largely a dime higher, following a rise of 10 to 15c last week, and a sale was made of prime distillery-fed steers at \$7.50, or 15c above any previous sale. The medium and common grades, which declined 15 to 25c last week, showed no further change. Last week's decline included cows and heifers except the best, as well as bulls. Hogs had a further advance of 5c today, with sales at the highest figures yet reached. Sales were at an extreme range of \$6.75 to \$7.65, compared with \$6.50 to \$7.50 on Monday a week ago. Excepting the last two years, hogs are much higher than in most former years, barring 1902, when they were nearly the same as now. The quality of the offerings is only fair, with a great many old heavy cows. Pigs are selling at \$5.50 to \$7.40; boars at \$2.75 to \$3.25 and stags at \$7.25 to \$7.75. Hogs averaging 180 to 225 lbs. are the highest sellers and coarse heavy and rough mixed lots the lowest in values. Hogs received last week averaged 236 lbs. compared with 254 lbs. a year ago, 231 lbs. two years ago and 223 lbs. three years ago. Sheep went at steady prices, while lambs were higher, the best range lots going at \$7. A consignment of 1161 Washington 67-lb. lambs brought that figure, and a double-deck of prime Idaho feeding lambs with killing quality went at \$5.90. Lambs are selling all the way down to \$3.25 for native culls, and feeders are doing better under a larger demand, selling at \$4 and upward for inferior to choice. Ewes are salable at \$1.25 to \$3.50; wethers at \$3.10 to \$4.25 and yearlings at \$3.75 to \$4.85.

Cattle were marketed last week freely, with the big supplies offered on Monday and Wednesday, as usual. There was the customary good demand for fat lots, which showed plenty of strength at times when the poorer cattle were slow and declining. Strictly prime cattle found buyers at \$6.90 to \$7.35, and there was a sale, of 18 head of extra fine 1254-lb. Angus, Hereford and Shorthorn steers at \$7.50, which is still another record-breaker for the season. The other end of the market was not so well maintained, as was to be expected with so many offerings, steers that were light in weight and lacking in flesh going at \$4.90 to \$6. The greater part of the steers sold for \$5.60 to \$7, with medium to good export steers selling at \$6.25 to \$6.75 and good to choice fat yearlings at \$6.50 to \$7.50. The best corn-fed beefs went \$1 per 100 lbs. higher than in May. Cows and heifers went to killers at \$3.30 to \$6.50, and \$6.75 and perhaps more would have been paid for something fancy in the heifer line. Cannors sold at \$1.85 to \$2.70, cutters at \$2.75 to \$3.25 and bulls at \$2.50 to \$5.35. Calves were in the usual demand at \$3 to \$8 per 100 lbs. the best firming up as the week advanced. Milk-cows and springers had a fair sale at \$30 to \$60 per head, with fancy ones quotably higher under scanty offerings. The stocker and feeder trade would have been on a larger scale but for the lack of prime cattle, killers competing with country buyers and taking the best feeders. Stockers sold usually at \$3 to \$4.75 and feeders at \$4.50 to \$5.50, few selling at high as \$5.25. Packers received numerous

droves of Texas steers consigned to them direct, and they were factors in holding down prices for native steers below \$6.25, with the \$5.25 to \$5.75 natives affected the most. A few trains of western range grass cattle from Wyoming, Montana and Nebraska have arrived and averaged fairly in quality for this season of the year. The steers sold at \$4.90 to \$5.75 and the cows and heifers at \$3.75 to \$5.25. Their general quality did not indicate any large offerings of really good range cattle for the near future.

Hogs are making a great record these days, prices having shot upward at a rate that has taken most stock feeders by surprise, with the \$7.50 predicted figure reached and past last week. While other western and eastern markets continue to receive such moderate supplies of hogs the Chicago market may be expected to show continued great animation and strength, with a large eastern shipping demand for the choicer class of light weights, which are still the market-toppers daily. There is a wide spread in prices, with extremely heavy packing hogs selling at a large discount, while boars are slow to share in advances. Pigs are marketed very much less freely than before the drought was broken, but they are still selling at a big discount, especially the little fellows, while stags sell for the best at prices greatly above those paid for the best barrows. Provisions have been headed in an upward direction in sympathy with hogs, and sales are large. Chicago stocks of provisions on August 1 aggregated 127,533,881 lbs. compared with 133,877,005 lbs. a month earlier and \$3,923,456 lbs. a year earlier. Further advances in hogs are generally looked for.

Sheep and lambs had fallen so abnormally low in prices, especially the wethers, ewes, yearlings and common lambs, that after Monday of last week sheepmen shipped in decreasing numbers, and reactions took place, although the trade requirements were not perceptibly larger. The best demand centered again in choice lambs that were neither light nor extremely heavy, and Idaho range lambs were apt to grade the best, being much choicer than most natives. There was a better call for range feeding lambs, and higher prices prevailed, with flocks from the Idaho ranges that weighed around 57 lbs. going at \$5.45 to \$5.60. Breeding ewes were in good demand, with sales largely at \$4 to \$4.50 per 100 lbs. for the better kinds. Cull sheep and lambs continued to sell extremely low and netted losses for their owners.

Horses were marketed so much more freely last week that sellers were able to resist the former declining tendency of prices, although the requirements of the trade were only moderate. A good class of draft horses sold at \$200 to \$245 per head, with extra heavy and choicer ones quotably salable at \$250 to \$320. A well-matched pair of grey drafters sold at auction for \$425. Good wagon horses sold at \$160 to \$195, and drivers had a moderate sale around \$175 to \$225. Horses selling at \$75 to \$150 were not in good demand.

LIVE STOCK NOTES.

Buyers have been fighting the advance in prices of butter in the Chicago market, but they have been unable to accomplish anything, and the advances made in Elgin have been followed by the same advances in Chicago. Speculators who buy in big blocks for the purpose of placing in cold storage have curtailed their operations temporarily, but the general demand has proved sufficient to prevent any uncomfortable accumulations. The production of creamery butter has been lessened a good deal in various sections of the country on account of lack of feed brought about by the dry and hot weather, but good late rains have helped matters a good deal, and already pastures are getting in better condition.

The steady growth of dairying in various parts of the country is reflected in the increasing demand for high-class Holsteins, with a fair call for Jerseys, but the Holsteins are greatly in the lead in the Chicago stock yards, where it is utterly impossible to fill half of the buying orders received. Few men who are fortunate enough to own prime milch cows care to part with any, no matter how much money is offered. The choicer cows that are offered in the Chicago market sell at \$50 to \$60 per head, but strictly fancy cows are quotable at \$65 to \$75.

The recent great boom in prices for hogs in the Chicago market and other western markets came as a distinct surprise to a majority of the stock feeders throughout the country, even to those who had figured on prime swine selling ultimately at \$7.50 per 100 pounds. These optimists admit that figure was reached and exceeded much sooner than they had counted upon. With such a showing and even ordinary mixed lots of hogs commanding extremely high prices, owners cannot be blind to the importance of finishing off their hogs in first-class shape. It has been observed that many consignments of hogs marketed from the dry sections have come good and fat, as their owners finished them off on liberal corn rations. It proved a good business policy, as such hogs brought very high prices, frequently more than had been expected.

Cattle killers in Chicago recently found that steers that cost them around \$6 per 100 pounds dressed 53 1/2 to 54 1/2 per cent, while at the same time cattle that cost them around \$7 dressed 60 to 61 1/2 per cent and really cost less on the hooks than the cheaper cattle. It is not so very long ago that \$6 cattle were graded as good and fat, but now they are graded as merely medium in quality.

So long as the cattle killers persist in buying up the cattle of the feeder class with a little flesh, there will be but a poor show for farmers who are desirous of refilling their feed lots with good steers. This is clearly bound to tell on the future beef supply. Doubtless there will be in the future, as in the past, plenty of ordinary beef cattle, but there does not appear to be a very good showing for a normal supply of choice beefs. That is the way stock feeding usually runs, either too much or too little feeding.

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 MARKET.

Thursday's Market.
August 10, 1911.

Cattle.

Receipts, 1230. Good grades steady; common dull, last week's prices. Bulls 25@50c lower than last week.

We quote: Best steers and heifers, \$5.50@5.75; steers and heifers, 1,000 to 1,200, \$5.00@5.50; steers and heifers, 800 to 1,000, \$4.00@4.75; grass steers and heifers that are fat, 800 to 1,000, \$4.00@4.75; grass steers and heifers that are fat, 500 to 700, \$3.00@4.00; choice fat cows, \$3.75@4.25; good fat cows, \$3.50@3.75; common cows, \$3.00@3.25; canners, \$1.50@2.50; choice heavy bulls, \$3.75@4.00; fair to good bolognas, bulls, \$3.50@3.75; choice feeding steers, 800 to 1,000, \$4.50@4.75; fair feeding steers, 800 to 1,000, \$3.50@4.00; choice stockers, 500 to 700, \$3.75@4.25; fair stockers, 500 to 700, \$3.00@3.75; stock heifers, \$3.00@3.50; milkers, large, young medium age, \$4.00@5.00; common milkers, \$25.00@30.00.

Roe Com. Co. sold Kamman B. Co. 14 steers av 901 at \$5.00, 1 cow weighing 930 at \$4.00; to Parker W. Co. 1 cow weighing 1100 at \$3.75, 2 canners av 825 at \$2.50, 22 butchers av 603 at \$3.75; to Rattkowsky 5 cows av 1064 at \$4.00, 3 butchers av 483 at \$3.00; to Parker W. Co. 22 steers av 1035 at \$5.60; to Breitenbeck 4 cows av 980 at \$3.25.

Bishop B. & H. sold Goose 5 bulls av 984 at \$3.30, 1 cow weighing 1060 at \$2.50, 4 cows weighing 950 at \$3.00, 1 bull weighing 920 at \$3.50; to Parker W. & Co. 15 steers av 1130 at \$5.65, 4 steers av 835 at \$4.50, 5 canners av 846 at \$2.50, 6 butchers av 630 at \$3.75, 2 butchers av 865 at \$4.25, 8 butchers av 537 at \$3.50, 3 canners av 820 at \$2.25, 6 butchers av 653 at \$4.00, 3 butchers av 660 at \$3.50, 1 bull av 1040 at \$3.25; to Rattkowsky 2 cows av 910 at \$3.00, 3 cows av 903 at \$4.25, 7 cows av 986 at \$3.25, 2 steers av 990 at \$5.25, 2 cows av 985 at \$3.50; to Kamman B. Co. 2 steers av 890 at \$5.40; to Froman 6 butchers av 535 at \$3.55; to Parker W. & Co. 3 cows av 1077 at \$2.25; to Cohen 6 cows av 270 at \$3.50; to Erban 5 butchers av 572 at \$3.00; to Froman 2 bulls av 694 at \$2.85; to Hammond S. & Co. 6 cows av 951 at \$2.50, 2 cows av 890 at \$2.50; to Heinrich 5 heifers av 760 at \$4.30; to Sullivan P. Co. 7 steers av 1316 at \$5.80, 5 bulls av 704 at \$2.90, 3 bulls av 1216 at \$3.50.

Spicer & R. sold Breitenbeck 28 butchers av 794 at \$4.50; to Hammond S. & Co. 28 butchers av 788 at \$4.60, 27 butchers av 884 at \$5.00; to Sullivan P. Co. 1 bull weighing 1050 at \$3.50; 1 cow weighing 1100 at \$4.75, 2 bulls av 685 at \$3.00, 1 bull weighing 1220 at \$4.00, 8 butchers av 777 at \$4.50, 7 butchers av 1043 at \$5.25, 4 steers av 1042 at \$5.25, 1 cow weighing 1030 at \$2.50; to Thompson & Bro. 1 bull weighing 1230 at \$4.00, 3 bulls av 893 at \$3.25, 1 steer weighing 830 at \$5.50, 2 cows av 935 at \$3.50, 11 butchers av 730 at \$4.00, 2 bulls av 670 at \$3.00, 2 cows av 1035 at \$4.00; to Regan 1 bull weighing 530 at \$3.00, 7 butchers av 600 at \$3.50; to Lachalt 5 butchers av 770 at \$4.50, 2 butchers av 880 at \$3.90; to Parker W. & Co. 2 canners av 865 at \$2.50, 1 canner weighing 850 at \$2.00, 4 canners av 820 at \$2.25, 1 canner weighing 770 at \$2.00, 4 canners av 845 at \$2.50; to Mich. B. Co. 1 cow weighing 1220 at \$4.50, 3 cows av 890 at \$4.25, 6 steers av 833 at \$5.00, 12 steers av 976 at \$5.25.

Haley & M. sold Applebaum 1 cow weighing 860 at \$3.50, 4 cows av 905 at \$3.85; to Kamman 9 cows av 850 at \$3.90, 1 cow weighing 810 at \$3.25; to Breitenbeck 3 cows av 1113 at \$3.75; to Schuman 4 steers av 875 at \$5.25, 1 cow weighing 830 at \$4.00; to Downey 10 stockers av 660 at \$4.00, 4 stockers av 535 at \$3.65, 1 stocker weighing 800 at \$4.00, 5 stockers av 560 at \$3.65, 1 stocker av 720 at \$4.00, 1 stocker av 530 at \$3.65; to Heinrich 14 steers av 1061 at \$5.50; to Sullivan P. Co. 3 cows av 1157 at \$4.25, 2 steers av 950 at \$5.25, 4 butchers av 840 at \$4.50, 2 butchers av 635 at \$4.00, 2 butchers av 810 at \$4.00; to Schuman 8 butchers av 812 at \$4.65, 2 butchers av 735 at \$4.65, 2 butchers av 720 at \$4.50; to Goose 5 butchers av 376 at \$3.50; to Regan 7 butchers av 620 at \$3.75.

Merritt sold Sullivan P. Co. 6 cows av 1100 at \$3.50, 1 bull weighing 1050 at \$3.50.

Haveland sold same 3 butchers av 803 at \$4.00, 1 cow weighing 1000 at \$3.25, 3 steers av 900 at \$4.60, 1 steer weighing 1120 at \$5.75.

Stephens sold Parker W. & Co. 6 cows av 1003 at \$2.75.

Haveland sold Bresnahan 11 heifers av 500 at \$3.40.

Borgia & S. sold Marx 3 butchers av 580 at \$3.80.

Johnson sold same 6 butchers av 800 at \$4.10.

Veal Calves.

Receipts 590. Market strong and 50 cents higher than on Wednesday and last week. Best \$8.00@8.75, others \$4.00@7.75; milch cows and springers steady.

Bishop B. & H. sold Sullivan P. Co. 1 weighing 160 at \$8.00, 14 av 140 at \$7.25, 5 av 150 at \$8.25, 3 av 170 at \$8.00, 6 av 118 at \$7.25; 1 weighing 210 at \$4.50, 3 av 135 at \$7.75; to Hammond S. & Co. 2 av 150 at \$7.25, 8 av 155 at \$7.25; to Sullivan P. Co. 4 av 156 at \$7.75; to Parker W. & Co. 3 av 140 at \$7.50, 4 av 140 at \$8.25, 13 av 160 at \$8.50, 18 av 200 at \$7.00, 5 av 115 at \$6.00, 13 av 155 at \$8.75; to Burnstine 9 av 150 at \$7.50; 10 av 152 at \$8.75, 4 av 155 at \$6.00, 15 av 160 at \$8.75.

Roe Com. Co. sold Mich. B. Co. 1 weighing 180 at \$7.00, 1 weighing 135 at \$2.00, 15 av 160 at \$8.00; to Hammond S. & Co. 3 av 145 at \$7.00, 10 av 150 at \$8.00, 2

av 140 at \$8.00, 1 weighing 210 at \$5.00. Stephens sold Newton B. Co. 2 av 165 at \$8.25.

Danvers & Kendall sold McGuire 10 av 150 at \$8.00.

Spicer & R. sold Hammond S. & Co. 13 av 135 at \$7.25; to Mich. B. Co. 9 av 155 at \$7.75, 12 av 160 at \$8.00; to Rattkowsky 8 av 205 at \$8.00, 1 weighing 130 at \$5.00; to Mich. B. Co. 1 weighing 140 at \$8.00; to Goose 22 av 150 at \$7.00; to Sullivan P. Co. 2 av 140 at \$6.00, 8 av 150 at \$8.50; to Burnstine 1 weighing 140 at \$8.50, 7 av 170 at \$7.00; to Newton B. Co. 8 av 185 at \$4.50.

Haley & M. sold Goose 3 av 200 at \$5.00, 11 av 160 at \$8.00; to Newton B. Co. 2 av 140 at \$7.50, 2 av 170 at \$8.00, 7 av 165 at \$7.00; to Goose 8 av 200 at \$6.00, 1 weighing 160 at \$8.00, 9 av 150 at \$7.00; to Newton B. Co. 2 av 135 at \$7.75, 12 av 150 at \$8.25; Mich. B. Co. 7 av 145 at \$8.25, 22 av 160 at \$8.50.

Johnson sold Goose 4 av 155 at \$8.25.

Laughlin sold Hammond S. & Co. 2 av 170 at \$6.50, 4 av 200 at \$7.75.

Haddrell sold same 14 av 155 at \$8.25.

Lovewell sold Burnstine 6 av 170 at \$8.25.

Sheep and Lambs.

Receipts 1036. Market 25 to 50c higher due entirely to light receipts. With fair run would be no higher. Best lambs, \$5.50@6.00; fair to good lambs, \$5.00@5.50; good to common lambs, \$3.50@4.50; fair to light sheep, \$3.25@3.50; culls and common, \$2.00@2.50.

Bishop B. & H. sold Mich. B. Co. 3 sheep av 100 at \$2.50, 19 do av 110 at \$3.40, 19 do av 90 at \$3.25; to Sullivan P. Co. 25 yearlings av 70 at \$4.50, 3 sheep av 125 at \$3.50, 8 lambs av 55 at \$4.00, 24 do av 77 at \$5.50, 39 sheep av 70 at \$3.75, 42 lambs av 70 at \$5.75, 13 do av 75 at \$6.00, 7 do av 58 at \$4.50, 17 do av 70 at \$5.50; to Newton B. Co. 86 lambs av 75 at \$5.50, 38 do av 70 at \$5.00; to Thompson Bros. 11 lambs av 75 at \$6.00, 19 do av 70 at \$4.50; to Sullivan P. Co. 22 lambs av 65 at \$5.25, 25 sheep av 70 at \$3.50; to Hammond S. & Co. 7 sheep av 145 at \$3.25, 10 lambs av 64 at \$6.00, 12 do av 65 at \$6.00; to Young 4 sheep av 115 at \$3.75, 6 do av 50 at \$3.10, 15 do av 130 at \$3.50; to Fitzpatrick Bros. 19 sheep av 110 at \$3.25, 5 do av 80 at \$2.00, 13 do av 75 at \$3.50, 28 lambs av 80 at \$5.75, 16 do av 65 at \$6.00, 18 sheep av 70 at \$3.50.

Spicer & R. sold Mich. B. Co. 9 sheep av 100 at \$3.25, 13 lambs av 67 at \$6.00, 3 yearlings av 100 at \$4.00, 100 lambs av 69 at \$5.90; to Newton B. Co. 29 lambs av 60 at \$5.00, 8 sheep av 125 at \$3.00; to Barlage 16 sheep av 120 at \$2.50, 28 lambs av 60 at \$5.00, 10 do av 61 at \$5.00.

Roe Com. Co. sold Sullivan P. Co. 25 lambs av 77 at \$5.50 and 6 sheep av 120 at \$3.00.

Kaley & M. sold Newton Beef Co. 8 sheep av 100 at \$2.00, 33 do av 90 at \$3.50, 3 do av 107 at \$3.00, 16 lambs av 75 at \$6.00, 32 do av 61 at \$4.75; to Thompson & Bro. 29 lambs av 67 at \$5.00; to Mich. B. Co. 41 lambs av 75 at \$6.00.

Hogs.

Receipts 2230. Market bidding 5c lower than on Wednesday. None sold up to noon. 15@20c higher than last Thursday. Range of prices: Light to good butchers, \$7.70; pigs, \$7.25@7.55; light yorkers, \$7.60@7.70; heavy, \$7.55@7.65.

Roe Com. Co. sold Sullivan P. Co. 225 av 190 at \$7.70, 150 av 180 at \$7.65, 44 av 165 at \$7.55.

Spicer & R. sold Hammond S. & Co. 355 av 190 at \$7.70, 60 av 140 at \$7.65.

Haley & M. sold same 140 av 190 at \$7.70, 145 av 170 at \$7.65.

Parker W. & Co. sold B. B. & H. 153 av 170 at \$7.65, 380 av 190 at \$7.70.

Friday's Market.

August 4, 1911.

Cattle.

Receipts this week, 1,667, against 1,340 last week; market steady at Thursday's prices. We quote: Best steers and heifers, \$5.50@5.75; steers and heifers, 1,000 to 1,200 lbs., \$5@5.25; do. 800 to 1,000 lbs., \$4@4.75; grass steers and heifers that are fat, 800 to 1,000 lbs., \$4@4.75; do 500 to 700 lbs., \$3.75@4.50; choice fat cows, \$3.75@4.25; good fat cows, \$3.50@3.75; common cows, \$3@3.25; canners, \$1.50@2.75; choice heavy bulls, \$4; fair to good bologna bulls, \$3.50@3.75; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000 lbs., \$4.25@4.75; fair feeding steers, 800 to 1,000 lbs., \$3.50@4; choice stockers, 500 to 700 lbs., \$3.75@4.25; fair stockers, 500 to 700 lbs., \$3@3.70; stock heifers, \$3@3.50; milkers, large, young, medium age, \$40@50; common milkers, \$30@35.

Veal Calves.

Receipts this week, 847, against 925 last week; market 25c lower than on Thursday; best, \$7@7.75; others, \$4@6.75. Milch cows and springers dull.

Sheep and Lambs.

Receipts this week, 2,686, against 2,674 last week; market steady at Thursday's prices; best lambs, \$5.50; fair to good lambs, \$5@5.25; light to common lambs, \$3.50@4.50; yearlings, \$3.50@4; fair to good sheep, \$3.25@3.50; culls and common, \$2.50@3; light common lambs, \$3@3.50.

Hogs.

Receipts this week, 2,235, against 2,531 last week; market 5c higher than on Thursday. Range of prices: Light to good butchers, \$7.40@7.45; pigs, \$7.25; light yorkers, \$7.40@7.45; heavy, \$7.40@7.45.

Prices for lard, pork, hams and other cured hog products have been moving upward for some time in sympathy with the advancing course of the hog market. It is generally understood that the big packers are the owners of a large share of the stocks held in the Chicago warehouses, and this has tended to develop caution upon the part of the "shorts," who have been covering their outstanding trades. The large consumption of provisions everywhere is reflected in the decreasing stocks in Chicago for a month past, and during the same time fresh pork products have had a large sale, these being cheaper than any other meats.

HAPPENINGS OF THE WEEK.

(Continued from page 120.)

To build a \$10,000,000 war vessel for Turkey. The vessel will be of 20,000 tons, will carry ten 14-inch guns and have engines that will drive her at a speed of 21 knots.

Pope Plus is reported as nearly recovered from a recent affection of the larynx.

The revolution in Haiti was successful in displacing the former government with officials selected by the leaders of the rebels. Followers of former President Simon arrived in New York Monday laden with spoils.

The reports that the city of London, Ont., would not permit the display of the American flag during the celebration of "Old Boys Week" seem unfounded as there was no opposition to the stars and stripes when unfurled with the union jack in the street there on Monday.

The asylum for the insane at Hamilton, Ontario, was destroyed by fire last week and eight bodies of inmates were afterwards recovered from the ruins.

Frederick W. Taylor, of Colorado, has been selected as director of agriculture of the Philippine islands. This is the beginning of modern scientific methods of agriculture in the Philippines.

National.

The steamship Columbia enroute from Glasgow to New York, struck an iceberg off coast northeast of Cape Race and was severely battered up. Several of the crew and passengers were injured by the impact and ice falling upon the decks of the vessel.

The unusual method of settling strikes by aid of an order from a court of justice was affected in Des Moines, Ia., Saturday, when Judge DeGraff issued an injunction which temporarily, at least, restored order where a long struggle was expected between employees and the street railway company of that city. Nearly 500 men walked out when the men agreed to quit, all of whom returned to their positions after the publication of the court's action.

Two boys, Allen Wilson and Edward Rich, aged 12 and 13 respectively, were carried out into Grand Traverse bay on a little sail boat where the rough waters overturned their craft and they were drowned.

The coroner's jury's verdict accuses the conductor and the motorman of the east-bound car of causing the wreck at Dearborn a week ago when a head-on collision resulted in the death of Lewis Hamilton. The members of the crew are under arrest and charged with manslaughter.

The United States senate is debating the recall provision of the proposed constitution of Arizona.

The dissolution of the Standard Oil Company has had a depressing effect upon quotation of their stock the past few days a decline of \$18,000,000 was shown Monday of this week and a total decline of \$59,000,000 in valuation since the influence of the order of the court has taken effect. On Monday 800,000 shares were sold. The actual value of this stock is placed at 600 per share leaving out "good will" and good management, and since that figure is now the market quotation it is not probable that brokers will reduce it much further and hence the influence upon business generally should not be greater than it has been already.

The cotton market took a sudden jump Monday, making an advance of \$4.00 per bale, but during the remaining part of the session half of the advance was lost.

Postmaster General Hitchcock has designated 50 additional postoffices as postal savings depositories in 18 states to begin operations September 4. The new postal savings bank at New York City took in over \$41,000 during the first week of its existence.

The Michigan state good roads association in session at Jackson adopted a resolution providing for the canvassing of every city and village of the state in the interests of good roads.

Heavy rains are causing floods in Kansas and Oklahoma. Stock has been driven to high land and in some places families are moving away from the streams.

Three persons are dead and 16 injured as the result of a wind and hail storm in Abilene and Taylor counties of Texas. Houses were unroofed, stores wrecked, wires thrown down, live stock killed and much damage was done to property in general.

The city of Saginaw is concerned over an accident to her largest water works' pump which leaves the municipality at the mercy of fires, as but one small pump is available.

The Georgian legislature is having interesting sessions during the consideration of a bill providing for the prohibition of the sale and manufacture of any beverage containing more than one-half of one per cent of alcohol.

Recent reports from Arizona and New Mexico say that the ranges are in the best condition seen in years, with plenty of grass and stock in much better shape than is usual at this season of the year.

Chicago and other western live stock commission firms have been sending out letters to their country patrons, advising them to finish off all their well-bred cattle, as there is a great shortage of such stock in the country. This is certainly a time when it will pay stockmen to produce a high grade of beef cattle, but inferior cattle should not be held any longer, as they will shortly come into close competition with lots of grass-fed cattle from the northwestern ranges.

CROP AND MARKET NOTES.

Genesee Co., July 29.—Haying and harvest about finished. High price of hay has started selling unusually early. The high wind of last Monday had a serious effect upon orchards, blowing off a large amount of fruit. Fall crops promise fairly well. Drought injured some and hail got in its work also. Sugar beets as usual suffer least of all, and are looking well. The best crop ever is anticipated. High prices have brought early potatoes on the market already. Farmers who suffered loss of buildings by cyclone are busy replacing the structures with new ones. Weather fine at present writing.

Northern Isabella and Southern Clare Cos., July 25.—Very dry and hot, little prospect for rain. All crops suffering for want of moisture. Haying nearly done and gathered in fine condition. Wheat threshing commenced and yielding from 12 to 30 bu. per acre. Oat cutting commenced and will be a poor yield. Early potatoes a failure, and late ones the same unless rain comes soon. Beans looking fairly well, peas a failure and sugar beets looking well. Red wheat is 77c per bu.; white wheat, 76c; oats, 40c; beans, \$1.90; potatoes \$1.50; butter, 20c; eggs, 14c.

OLD SETTLERS PICNIC.

The old settlers of Jamestown, Ottawa Co., Mich., will hold their ninth annual picnic at Spring Grove, near Jamestown Center, August 12, 1911. An interesting program will be rendered and free transportation will be provided from the Fruit Street Interurban Station to grounds and return.

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HORTICULTURE

PLANTING LARGE TREES.

Some years ago the Connecticut station conducted investigations along the line of planting fruit trees close together and then when space became crowded replant them in a larger field and, if necessary in a still larger area as the second area became small. So promising did the scheme appear to the officials that it was advised to practical men for trial. Since men began spraying and found it necessary to have the trees of the orchard farther apart than they had been planted in earlier days, it has seemed that too much space is being occupied by the young trees until the orchard comes in bearing and as a consequence of this unprofitable occupation of the soil much is lost to the owner, especially where land is high and greatly needed to keep up running expenses. Where apple trees are planted forty feet apart in the rows the small trees would, as readily thrive if put on one-quarter of the land and not suffer for the first eight or ten years of their existence. To grow these trees on the smaller area and then remove them or a number of them to other places and thereby save to the owner a large portion of his land for other purposes was the object of the above experiments, and it seemed feasible. But we have yet to learn of men in actual practice who have endeavored to secure an orchard through this method; however, information is at hand from Grand Traverse county concerning a 15-year-old orchard on the farm of Mr. Zeigler, where the trees had been set 12 feet apart and where ten of these trees were replanted last fall at a cost of \$15.50. The illustration on this page is that of one of the Spy trees in its new position. It is thriving after the treatment necessary for its removal. The other nine are also doing well and seem to confirm the conclusion reached by the eastern station, since the land occupied by one of these trees would certainly be worth more than the cost of moving. Possibly many readers have had experiences with the transplanting of old fruit trees. What the results have been would make interesting reading for all Michigan Farmer patrons and would be valuable matter for those who have orchards that are now too closely planted, as well as those who wish to set out trees but cannot see their way clear to give over the land for a time sufficient to bring the trees into bearing.



A 15-year-old Spy Tree Thriving After Being Transplanted.

CLEANING AND FERTILIZING THE GARDEN.

From now until freezing, cleaning up the garden will be in order. The fall is the time to prepare for next year's crop. Berry canes are about the only refuse I burn. I wouldn't burn these if a disease had not made its appearance. How much better a clean, freshly tilled garden looks than one whose ground is clear of weeds but caked, and the small fruit neglected. I bury the tips of the black raspberry canes that I neglected to nip. I do this as early as I can so as to get a mass of roots. August is the best time. If not buried they should be cut back this fall. The nipped canes have grown to be great, strong, well-branched bushes. You may cut the branches back to about 18 inches in length. Give the knife a slanting push from the underside towards the tip. It may be better to take hold of the branch between the main stalk and the place to cut.

It does not pay to burn the straw, cornstalks, vines, cabbage stumps, weeds, pea stalks, onion tops, beet and other root tops and grass trimmings. You owe them to the soil. The ground needs them. Pay the debt. This pile of dirt looks rich in plant food. It is last year's odds and ends of the garden waste. Those piles under the orchard trees were cut before the summer apples were harvested. They make the best of manure for

the young trees and shrubs. Increasing the humus is my aim.

This fall cleaning is worth two of the spring work. I commence the work as soon as any tops, thinnings, droppings from the orchard, or refuse of any nature is formed. Fence corners, turning borders, paths, back yards, etc., should be cut often and unless usable for feed piled and saved to be plowed under or added to the compost heap.

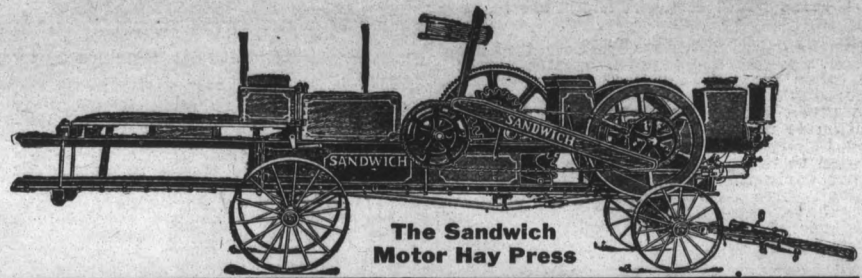
All green or dried vegetable matter is not alike in value as a manure. Some increase the fertility more than others. Yet all are worth saving. And there is a point young farmers should notice immediately: All manure, animal or vegetable, do not furnish the same food for the use of the plant. Neither should all parts of the garden or farm field be fed the same quantity or quality each year.

A successful farmer, no matter what line of work he is in, will study the composition of every square yard of his cultivated land. Even the subsoil should be investigated because of its influence. Fields and gardens often run from clay or silt to sand in a short distance. Adjoining square yards will show a great difference in humus, or habit of leaching. Years ago a large tree was turned up by the roots and the spot still is affected. A part of this field was formerly a forest the rest prairie. It takes years for the two parts to become alike and need just the same food at each meal. No two plants are just alike in their ways and likes of eating, any more than animals. No two masses or varieties of roots would relish the same breakfast. Then,

food should be seasoned differently and served in different ways. Many plants eat near the surface of the ground; others prefer to eat and live under a heavy cover. Thus the farmer who early in the fall keeps on his desk a detailed plan of his ground, showing just where each crop is to be planted and grown the next season, especially if a gardener, feeds and prepares that ground as that plant likes, is successful. Certainly there are some general laws that apply to every plant and field but each plant has an individuality and each piece of ground is not built the same and will not act as a store-house under the same treatment. Strange as it may seem, sawdust, if old, is a much better dressing under some circumstances than several manures. I working in broken slag and ashes than by liberal applications previously made have had better crops on some soils by of stable manure. There is still another point: some of this refuse will cause the soil to be sour more quickly than others and before you will realize it. Constant testing, then, is in order, as all manure of any kind will produce a sour condition in time. There are some crops that like a little acidity while others worry if the soil is tainted in the least.

I like to know where I am to put certain crops next year so I can apply nitrogenous or mineral foods in liberal or small quantities and cover deeply or shallow.

It is little things that make large results. Our minds are often fastened on nothing but large matters can be considered, and results are disappointing. My whole study is to feed the soil plenty of humus but prepared to suit the taste of the plant that is to be fed. This to be followed with frequent stirrings of the



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soil next season, weeds or no weeds, so each class of bacteria may be kept at work. It is such little matters that bring in a net profit. H. L.

COVER CROPS FOR YOUNG ORCHARDS.

I have a young cherry orchard set one year ago last spring. Last year corn was planted between the rows. This year beans were planted. These have had good care and are making a fine growth. I am advised to sow a cover crop but how can I go about it, with the bean crop not ready to harvest yet, except to turn it under, and would it make enough growth before winter to protect the young trees? Our orchard expert advises sowing oats and vetch, but vetch is not a sure crop here and is also high-priced. Oats are also a poor crop here. Clover makes two slow a growth and rye, this man tells me, is the last thing he would sow, as it is a great moisture gatherer. I also have 300 newly set trees with corn between rows, growing finely for the most part, but what about a cover crop? Manistee Co. Mrs. J. J. S.

If the land where this cherry orchard stands is very light and the beans were still small enough so I could sow a cover crop and cultivate it in between the rows I might do so if I thought the advantage of the growth before harvesting the beans would more than counterbalance the additional labor of pulling them by hand, as I do not believe the bean puller could be used without badly damaging the cover crop. If the soil was fairly rich so a crop sowed later would make a fair growth, or if the beans were getting too large to allow of cultivating in a cover crop to advantage I should wait until they were harvested and sow a cover crop at that time. Without knowing the conditions in this case I should think that the latter would be the practical solution. The beans could probably be harvested from the first to the middle of September, and a cover crop would make quite a growth in our latitude after this time if there were plenty of moisture. We sowed rye after beans several years ago and got enough growth to be of considerable value, probably six inches that fall. I believe oats would make a more rapid growth, and if vetch could be sown with it this would make a more stable growth and be of some protection during the winter and make quite a growth in the spring before turning under.

We have about the same proposition to meet in a young orchard, part of which is cultivated without crops and part of which is in corn. Last week we sowed a bushel of oats and 15 pounds of vetch seed per acre in the cultivated part, and intended to sow the same in the corn and cultivate in, but a hard wind storm just as we were ready to sow blew the corn over so it will be impossible to do anything with it until the corn is cut. We shall then sow oats and vetch, using more seed than on the other part, and hope to get quite a growth after this time, at least as much as winter wheat gets in the fall, which is quite a protection.

The part of your orchard that is in corn could be sown at once if it is not blown over and the seed cultivated in. If it can not be cultivated the crop can be sown after cutting, though in your latitude you might have to wait until spring for much growth. Buckwheat will make a rapid growth in the fall if the frost is not too early, but is not much winter protection. It could be used instead of oats if desired, but we have found that oats make about as good a fall growth as anything, and vetch will come on ahead of the clovers and make considerable growth in the fall and a rapid growth in the spring.

I do not believe I should sacrifice a good bean crop for a cover crop. I understand that your orchard was in corn last year without a cover crop, and came out all right. On strong land a cover crop is not an absolute necessity, but a partial safeguard, and a means of securing some humus. If you can get straw, marsh hay, or coarse manure you can mulch the trees this fall, being careful to put wood veneer or tarred paper tree protectors about the trunks as a protection from mice and rabbits, and you will have both the protection and the humus. If you can not get this it may answer to sow a cover crop along the row of trees in the beans now and leave the balance of the field. These strips will protect the trees considerably and help to hold the snow. We have done this in late potatoes and in corn. You could even sow only about the trees if the strips could not be sown, and hoe in the seed. There are many things that can be done to meet special conditions in sowing a cover crop, so the reader must use judgment. Calhoun Co. S. B. HARTMAN.



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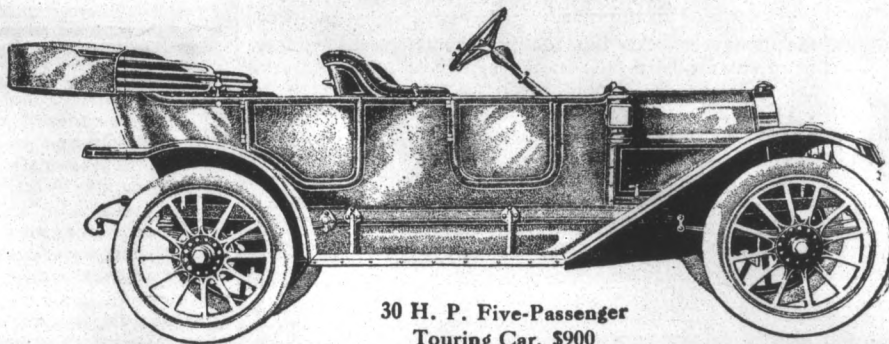
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MICHIGAN FARM BARGAIN! 160 acres, 40 miles west of Saginaw, 70 a. cultivated, good land growing sugar beets, chicory, oats, rye, corn, etc. Good orchard. Creamery and chicory factory near. 8-room house, large barn, good buildings, ice house and dairy. Drilled well. One-half mile from R. R. station. 90 acres pasture and woodland. Woven wire fences. \$2000 cash and mortgage for \$2500. If you want business, write Melchers Lumber Co., Ford Bldg., Detroit, Michigan.

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Woman and Her Needs

At Home and Elsewhere



THE GOLDEN DAYS OF YOUTH.

"I tell you what," said the young woman philosopher, "it is up to every girl to decide when she is young just what sort of old lady she will be. I've noticed that some of the traits which are quite excusable in a pretty young girl or a bright young woman, are thoroughly detestable in a wrinkled, old woman. I suppose they were bad in the young girl, but people excuse them. When she is old, however, she will find everyone as eager to condemn as they are now to praise, and it will be next to impossible to change them. I have come to the conclusion that if I don't want to be spoken of as 'that old shrew' when I am aged, it is up to me to cultivate a habit of self-control and golden silence now."

"Yes," said the older woman sadly, "you're right, and I wish someone had told me 40 years ago what you have just said. It would have saved me lots of trouble and suffering. I always had a high temper, and no one ever took the trouble to teach me to control it. When I was little, father boasted of my spirit and determination to have my own way. Mother, who was a pale echo of father, sighed and said nothing when I had a tantrum. I quickly found that flying into a passion would get me my own way, and I wasn't wise enough to know that having my own way was not the best thing in life. I grew into young girlhood and young womanhood, still with no effort to control my temper. I was handsome, father had money, and no one was brave enough to tell me my faults, except one old aunt and her I abused for her pains. When I married, my husband would put up with any amount of abuse rather than have words with me, so I still kept on raging."

"I was middle aged before I saw my mistake. I began to notice that I never kept my friends long. At first it didn't trouble me much, but after awhile I began to wonder. Then I tried to analyze the situation but even then I was so self-satisfied I failed to see the true cause. It took a chance remark of a former friend to open my eyes. She was

my past and present and I saw the justice of the remark. I determined to make amends, but I fear it is too late. Habit is a strong taskmaster and a bad reputation is hard to live down. No one makes excuses for me now, I am getting old and unattractive, and then no one knows the struggle I am making to do better. You are right, girlhood is the time to decide whether you will be loved and loving in old age, or unlovely and unloving."

"And temper isn't the only trait of girlhood that grows into unloviness with advancing years. The child who runs into another room and greedily eats her sack of candy while other children stand around outside hoping for a share, has a mean old age ahead of her. Shame may break her of some of her greediness as she grows older, but the spirit of stinginess will be there unless she is shown the hideousness of it. Evil speaking, irreverence, undue love of dress, intolerance all should be corrected in youth if we hope to be called 'that dear old lady' in the years to come."

DEBORAH.

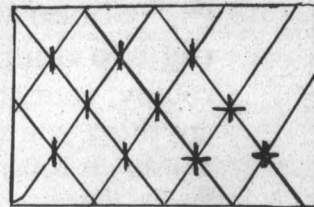
DARNING AND COUCHING STITCHES.

MAE Y. MAHAFFY.

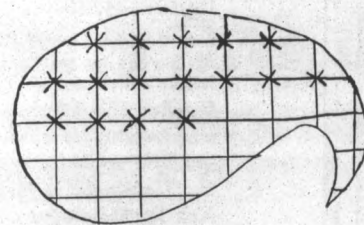
Under these headings we have some of the most useful of all embroidery stitches, helping as they do to fill in large spaces in a charming manner with far less expenditure of time than a majority of other stitches would call for. Rich, attractive results are easily obtainable by these methods, utilizing one of the outline stitches as a surrounding feature, if preferred to the couching shown in the partially wrought dolly pictured.

On this dolly several forms appear. The disk in the center is filled with the ordinary darning stitch, with which all women are familiar. It is frequently known as the Queen Anne stitch. It is made up of parallel rows taken directly across the space to be covered. These rows are then crossed with other parallel

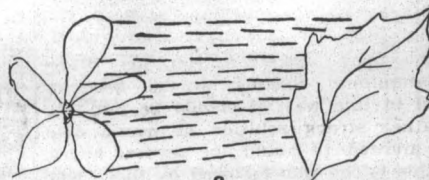
side of this disk are covered with brick couching. One strand or more of the working floss is used in the needle at one time. In this instance four strands are utilized. Unless one is making use of the many stranded floss this helps to obtain results speedily. The strands are then placed straight across the space in parallel rows. Short stitches are then placed at right angles to the rows, each covering a given number of threads, thus holding the loose strands in place. These



1.



2.



3.

short stitches should be set at regular distances apart, but should alternate with spaces in each succeeding row.

The background is filled in with brick darning. This consists of rows of evenly spaced, equal length running stitches, which appear in an unworked corner. The spaces are then filled by a return row of similar stitches, and the rows connected with stitches taken straight across the space between. These stitches alternate in the various rows with the spaces above and below, after the mode of laying bricks, thus giving the name to the stitch. It is a very speedy method of filling large spaces or backgrounds, and when worked in a contrasting color to the design proper is very pleasing in effect.

Two outline couching stitches appear, very similar in point of construction. The heavier outlines the disk and leaf forms of the pattern. It is made by carrying a group of three strands of the floss along the outline, having brought the needle up from beneath at some point of the design. Another needle threaded with one strand of the same or a different color is used to stitch the group of strands down at regular intervals, the stitches being taken straight across the threads. The outline threads may be crowded together, as in this instance, or spread flat, side by side, and as many may be used as may be desired. The ends must be drawn to the wrong side and fastened.

The midribs of the leaf forms are in a finer couching stitch, one strand being couched down by another in an over and over stitch, catching into the material just a trifle each time beneath the outlining strand. The couching stitches thus slant in one direction all the time. Quite heavy cords may be used in this way, and will result splendidly in heavy materials. This is sometimes known as the twisted couching stitch.

The hem of this dolly is also couched into place with even heavier lines than the leaf forms. This style of finishing hems is advocated by arts and crafts societies generally, and is certainly practical and pretty. The hem must be turned up on the right side.

Figures No. 1 and No. 2 show two methods of couching permissible for

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A gentleman who has acquired a judicial turn of mind from experience on the bench out in the Sunflower State writes a carefully considered opinion as to the value of Grape-Nuts as food. He says:

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"Grape-Nuts keeps us all in perfect physical condition—as a preventive of disease it is beyond value. I have been particularly impressed by the beneficial effects of Grape-Nuts when used by ladies who are troubled with face blemishes, skin eruptions, etc. It clears up the complexion wonderfully."

"As to its nutritive qualities, my experience is that one small dish of Grape-Nuts is superior to a pound of meat for breakfast, which is an important consideration for anyone. It satisfies the appetite and strengthens the power of resisting fatigue, while its use involves none of the disagreeable consequences that sometimes follow a meat breakfast." Name given by Postum Co., Battle Creek, Mich.

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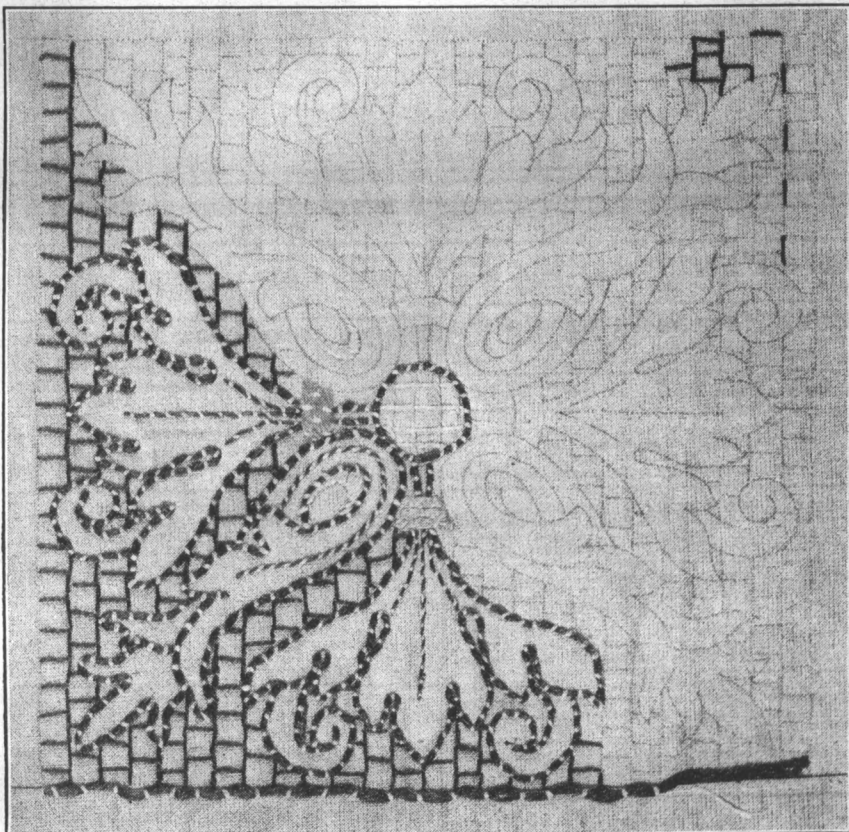
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Partially Wrought Dolly Showing Effect of Darning and Couching Stitches.

a woman I had admired and hoped to keep as a friend. Imagine my feelings when I overheard her say of me:

"That old shrew has such a fiendish temper, Job himself couldn't get along with her."

"At first I was too angry to think of anything but the unkindness of it. Then I began to think seriously, to look over

rows from the opposite direction, the latter being woven under and over alternate rows of the former group. The lines are placed at some distance in the disk, but may be crowded up quite close, just as in the plebian stocking darning. Either will give a pleasing finish to a large space.

The solid looking bars a little way out-

backgrounds or large figures. The same principle is involved in both. Threads are laid across the space from both directions, either diagonally, as in Figure 1, or straight, as in Figure 2. The intersecting points are then caught down to the material by short stitches taken right over them. These may be single or cross stitches. They are often called diaper couching, or diamond and square filling stitch.

The simple darning stitch is shown in Figure No. 3. These stitches may cover the space straight or diagonally, but must be placed the same throughout the design, and are usually utilized as background stitches, although they are well adapted to fill in leaves, petals or large figures, which are outlined in some decided manner. The stitch is the running stitch used in sewing, only a short stitch being taken on the wrong side of the goods, and the lengths kept even throughout. The rows must be parallel, just a trifling distance apart, and stitches must alternate with spaces in the various rows.

A great many couching and darning stitches are seen in Mountmellick embroidery, as well as in the later heavy, colored work, especially for pillow covers, library scarfs, and the like.

TO BE BELOVED OF ALL.

BY ELLA E. ROCKWOOD.

There is no one who courts disfavor. We all want to be loved, rather than hated, to have pleasant things said about us, to have friends wherever we go. But if we are to succeed there are certain obligations on our part, certain musts and must not be observed. There is no royal path for the favored of fortune other than the common one which as readily leads the plainest and the poorest of its followers to the envied position which brings friends wherever they may go.

If we study the lives of those who make friends readily we will find that they are unselfish. They have always a helping hand for those in need, not necessarily of money, but of counsel and of kindness as well as a sympathetic ear for the sorrows of others. They are good listeners and never betray a confidence. Their tongues are not lent to gossip nor to criticism. They may be interested in the affairs of their friends but are not unduly curious concerning them.

Another qualification possessed by those who are favorites among their acquaintances is that they have learned to keep their own troubles in the background. While ready to give a listening ear to the woes of others their own are rarely mentioned. Come to think about it, nobody cares to hear such things, anyway. A smile may hide an aching heart and all the better for it, and nobody wants to hear about our aches and pains.

A remark made at the demise of a much loved woman was, "She never lost a friend." New ones were gained, yet the old ones were retained as firmly as ever.

Kindness, courtesy, unselfishness, fidelity, are guide posts on the way. Success cannot be obtained without observing them.

ALUMINUM COOKING UTENSILS.

BY CHARLOTTE BIRD.

Judging from her article in the Michigan Farmer for February 18, on aluminum cooking utensils, Harriet Mason has been unfortunate in her choice of manufacture. For six years I have used aluminum cooking utensils almost exclusively and I am still about as foolishly fond of them as at first. I have made a special study of aluminum for cooking utensils and, if it is worth anything, I should like to share the results with others.

There are many firms which manufacture these cooking utensils and they are of every grade of morality. As in the lump the metal is very expensive, it follows naturally that by some of these firms it is badly adulterated and made so as not to be worth the low price asked for it. But there are a few firms which manufacture honest goods. These products have their firm trade mark plainly stamped on every piece. I would not think of buying an aluminum cooking utensil whose maker was not proud enough to wish his name stamped plainly upon it.

A well-made aluminum cooking utensil, of pure metal, has to be paid for. It is not offered on bargain counters. But its general excellence and practical indestructibility make it the cheaper in the end.

Aluminum cooking utensils do not need necessarily to be made of a thick, heavy weight. One well-known firm, at least, manufactures a first quality of articles in sheet aluminum. But they are made heavy enough to last a very long time with anything like good care. But the very light weight with a rough, unfinished surface inside should be rejected utterly.

Of the sheet aluminum the general neatness and durability of finish, especially, the finish inside, are the distinguishing qualities. The good wear has a hard, smooth finish, intended to make it withstand roughness and discoloration. The thick aluminum has not this finish. Consequently, when it has been used for some years even with good care, it turns brown.

No pure aluminum cooking utensil is ever injured by any fruit or vegetable acid fit for the human stomach. This was proved conclusively in tests made at the world's fair in St. Louis. There aluminum kettles were kept for days if not for weeks, with fruit standing in them and with no injury whatever to fruit or metal. Aluminum is the cleanest of all the metals for cooking purposes. It is, therefore, the greater pity that the cheap, adulterated grades of goods should spoil its reputation among people who do not understand the situation.

Aluminum is not injured by vinegar alone, however sharp. But if this acid hold a large quantity of salt in solution it becomes injurious to the metal. Aluminum is injured by alkalis, such as soda in large quantities and a vessel might easily have a hole eaten through it. But any quantity of soda fit for the human stomach would do it no more harm than to darken the inner surface. This darkness is readily removable by scouring or by cooking tomatoes or rhubarb in the vessel. I have used the necessary amount of soda in cooking beans, of course, draining and washing afterwards, with no harm whatever to my aluminum.

Aluminum should be kept scrupulously clean. The metal is very soft so that impurities, like hot lard on frying pans, are burnt into it and with each heating become more difficult to remove. When an aluminum cooking utensil becomes soiled in this way, it should be put into a rather strong solution of oxalic acid and allowed to stand for several hours. As this is the rule followed by those who manufacture the goods, oxalic acid cannot hurt a pure aluminum vessel, if used as directed.

Aluminum as a metal absorbs a tremendous amount of heat. This heat is not concentrated at one point but is evenly distributed all over the utensil. This is why foods like milk and tomatoes can be cooked down in aluminum without burning. Of course, common sense must be used just the same as in cooking in other metals. An aluminum cooking utensil should never be kept for any time over a roaring blaze. It becomes so intensely hot that no food could resist burning. But this quality has also its decided advantage; one can cook with such a small amount of heat. Aluminum is a decided saving to gas bills. Place a kettle of fruit butter over a slow fire and the cooking will go on with need of only occasional stirring of the fruit which will settle to the bottom. The slow cooking of food also improves the flavor.

Aluminum retains its heat for a long time. This it is which has caused it to be so widely adopted for the fireless cooker. Where a meal has to wait for some delayed member of the family, this quality makes aluminum for a coffee pot or cooking utensil ideal. But food should never be set away in a warm aluminum vessel; the summer temperature so long maintained, is apt to sour the food. Even in a fireless cooker one should keep the food hot, not merely warm.

In selecting an aluminum coffee pot, one should well consider the spout. If the spout is too small and crooked to be reached by any cleaning apparatus, it should be definitely rejected. A dirty spout in any sort of a coffee pot should not be tolerated because it is the breeding place for a multitude of sanitary sins. But dirty aluminum corrodes and produces a mass of filth. With some of the small spouts the little brushes used in cleaning bottles, come most successfully into play.

Wheat bran, scalded, then the water drained off, is excellent for washing fabrics that will fade. No soap is required. Pour water on bran again and use this water for rinsing and starching. —Miss L. M. L.

The Grocer's Answer

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"These soda crackers are crisp and full flavored throughout.

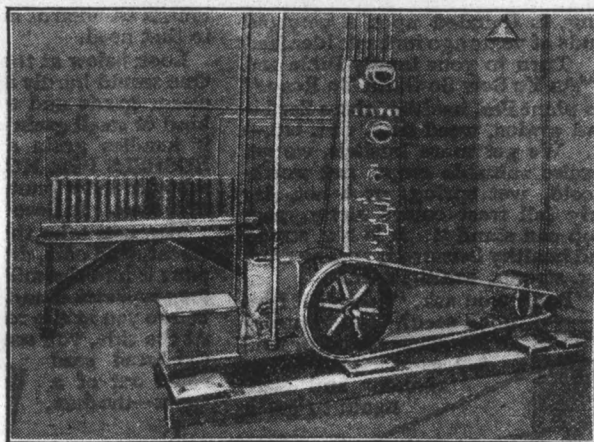
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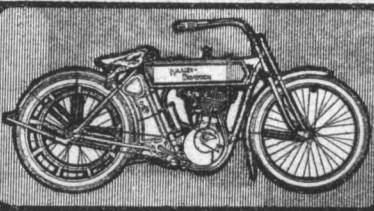
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accomplished. I'd like right well, reader, to tell you all about the "Chatham System" and show you how handsomely it will pay on your farm. I will tell you here a few things and then I want you to drop me a line so I can present you free my famous book, "The Chatham System of Breeding Big Crops."

Manson Campbell

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- Increases the value of your land.

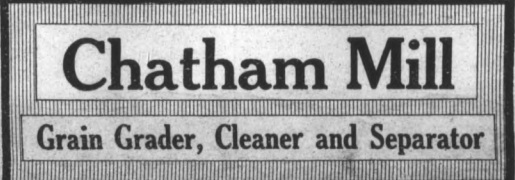
No matter how large or small your farm, or what crops you grow, or how rich or poor your land, or how you now cultivate it, you can just as well double your crop profit by adopting the Chatham System. And—remarkable as it may seem—farming by the Chatham System means no extra work or trouble and practically no more expense.

What the Chatham System Is

The Chatham System of Breeding Big Crops, while comparatively young, is founded upon a very old teaching. Thousands of years ago its basic idea had been put in words. Turn to your family Bible and read these words: "As Ye Sow So Shall Ye Reap." That is to say, if we plant **Fat**, healthy, clean Seed—free from small, bad grains, weed seed, dirt, etc.—we get **FAT** Crops. We get more bushels, we get better quality; we raise **valuable** crops, not worthless weeds. If a cold, wet spring, or a hot, dry summer, or an early fall frost comes along, your crop can stand it. It is big, strong and healthy because it sprang from big, strong, healthy seed.

"But," you ask, "how shall I get good seed?—run to a seed dealer every season or haul my seed grain to an elevator and back again to get it

cleaned?" Do nothing of the sort. Get a farm machine that cleans, grades and separates your grain. Breed up your own seed—save money and time by doing it yourself. Get pure seed and bumper crops from those Seed. Such a machine will cost you a few dollars, but it will pay for itself over and over again the first season and will serve you for many years.



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dirt, etc., have been blown out. Beneath the mill are the small, sickly, irregular grains of wheat (fine for feed, but not good to plant). In front of the mill, all bagged and ready for seeding, storing or marketing, are the **big, plump, healthy grains of Wheat**.

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The Chatham Mill has such enormous capacity that it pays well to **clean your grain** before selling it. Then the elevator can't "dock" you. You get all that's coming to you. The screenings, which your elevator has been keeping and paying you nothing for, you **keep at home**. Makes fine feed.

Try the Chatham System Free

I invite you to try my Chatham System of Breeding Big Crops Free. I will furnish **everything**—not only a full explanation of the System, but I will send a **Chatham Mill** along. I won't let this trial cost you anything—not even any freight on the Mill. I agree to pay all. After a month or so, and you've had time to put the Chatham System to a hard test, if you find it is paying you well, I will let you have the Mill at a low figure. Otherwise, just return it at my expense. This test is free. You neither invest or deposit any money or make any agreements to do so.

My Masterpiece Book Free

Send me the coupon below, properly filled out, or a postal and I will send you **FREE** my great copyrighted book, "The Chatham System of Breeding Big Crops." I would prefer a letter from you, however, telling me how many acres you have under cultivation, what crops you raise, how many bushels you usually get per acre and how big a crop you had in your neighborhood the past season.

I want to get acquainted with you. I want you to be one of the 200,000 new friends I am now making. I want you to plant "Fat" Seed, grow "Fat" Crops and always have a "Fat" pocketbook. Write me, won't you? Use pencil and postal, or coupon, if you have no letter paper handy. Address me at nearest office.

MANSON CAMPBELL
President Manson Campbell Company
Detroit, Mich. Kansas City, Mo. Minneapolis, Minn.

FREE BOOK COUPON

MANSON CAMPBELL, President Manson Campbell Company
Detroit, Mich., Kansas City, Mo., Minneapolis, Minn.

Address Nearest Office. Dept. B

Please send me your book, "The Chatham System of Breeding Big Crops."

I have _____ acres under cultivation.

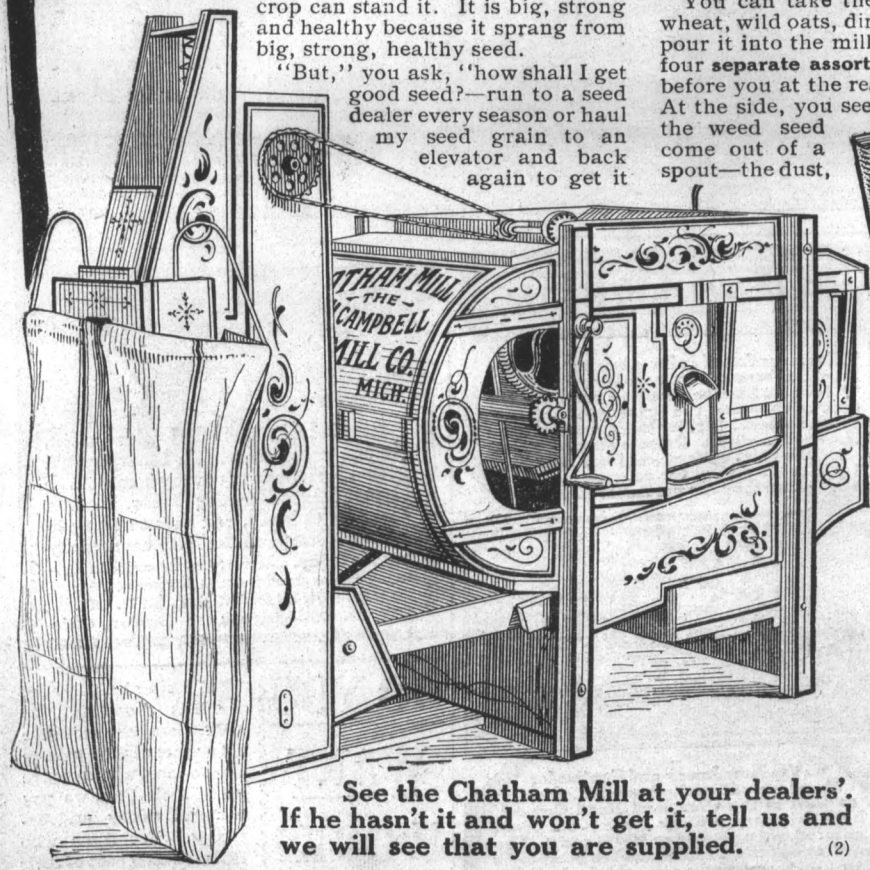
I raise these crops _____

Name _____

Town _____

State _____

R. F. D. _____



See the Chatham Mill at your dealers'.
If he hasn't it and won't get it, tell us and
we will see that you are supplied.