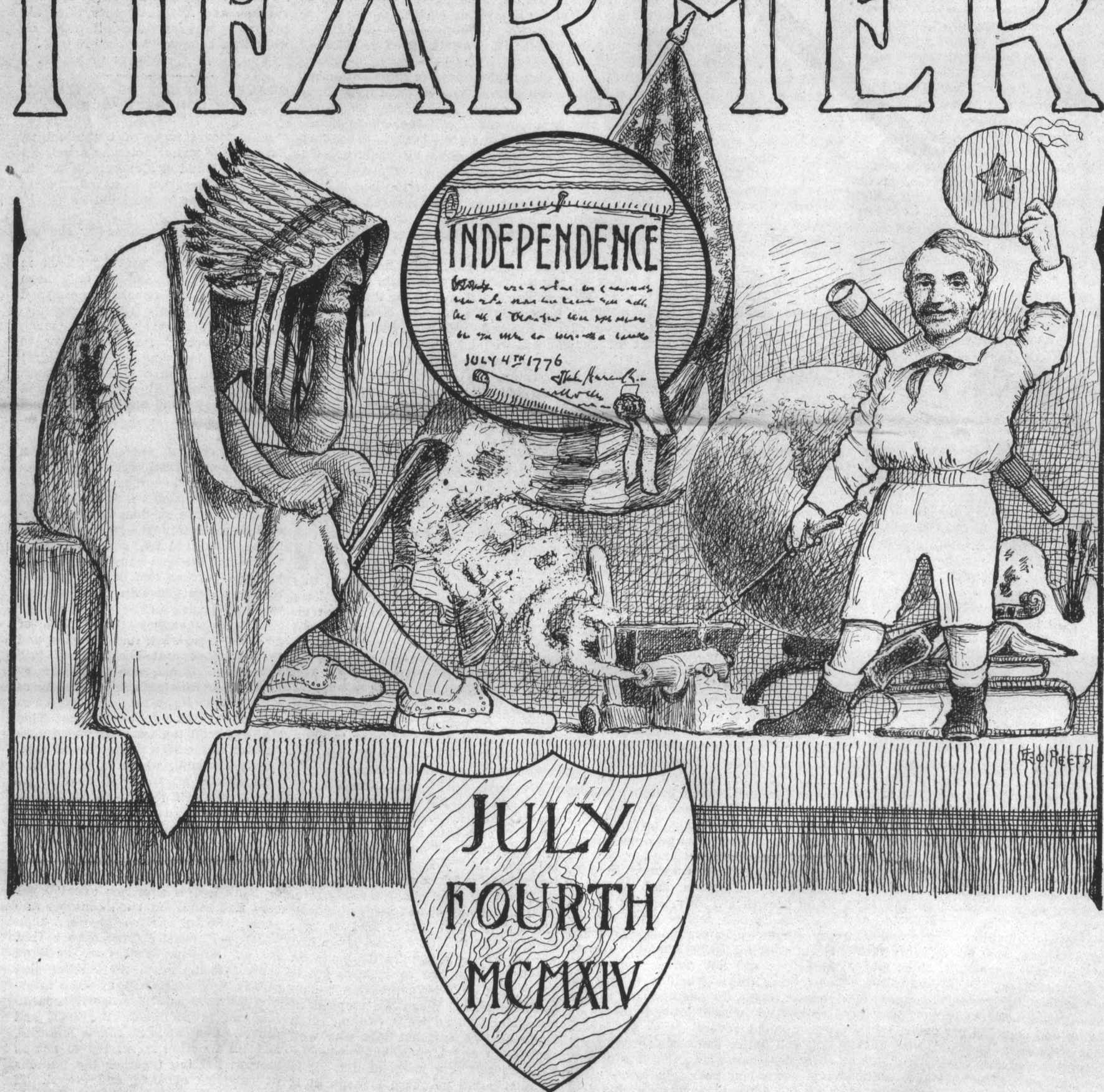


VOL. CXLIII NO. 1

MICHIGAN FARMER



DETROIT MICHIGAN

Analyzing Labor Costs.

I HAVE been much interested in your cost system discussion. As Mr. Peck says in his illuminating article, cost finding must come with the farmer before he can expect to be an "I know" business man. Farming can and should be reduced to a business basis and intelligent book-keeping will go a long way in "the undiscovered country" of the average farmer. There are, however, several things, I fear, that even Mr. Peck will need to study. For instance, on the eight acres of potatoes in question he figures his man power at 15 cents per hour, his horse power at 15 cents per hour, and his machine hours at less than six cents per hour. He is manifestly wrong in these costs.

There are many things that enter into man, horse and machine costs beside salary. What about productive and unproductive hours? Costs, at best, can only be figured approximately. That is to say, the same labor done at two different periods will not cost the same, and so we more safely arrive at approximate costs by the law of average.

To illustrate: Profits and low costs come from a high percentage of productive hours. Contrariwise, profits are cut and costs increase with a high percentage of non-productive hours. Hour costs, therefore, will call for a regular schedule of hours for labor and the constant planning of how the passing hours can best be applied to constructive labor.

Then the question arises, what are productive and what non-productive hours of labor? On the farm there is generally too little of the first and too much of the last named. I should say that plowing will be classed as productive hours. But how many working hours in the month or year are given over to plowing? Remember, we are working on the law of average and this can only be learned from an accurate record of how each working hour of each working day for a given period—one month, or better, one year, was spent. In other words, each laborer therefore should account in writing each day just how and where he has spent his working hours. This, in turn, calls for a farm plan which Mr. Peck evidently already has, as his cost card is in account with Field C. Each field should be charged each day with the hours of labor bestowed upon it.

Mr. Peck also, very properly, has an "overhead" expense, but I cannot think he has taken into account all items which should be included therein. Let me recount some of the items of expense which should appear in overhead expense: Manager's or owner's salary. This should be a reasonable sum equal, at least, to what these services could be sold for anywhere else. Interest on investment, six per cent per annum, or the total investment in lands, machinery, improvements, buildings, working capital, etc. If there be a mortgage on the farm its face value should be deducted and the interest on the mortgage added to the overhead, also taxes, depreciation on buildings, machinery, tools, fences, etc., figured on the average life of the article in question. Some machinery depreciates 10 per cent per annum and some 25 per cent. Be fair. That man is a big fool who cheats himself—or anyone else. Rent, insurance, allowance for postage, stationery, books, and other contingent expenses, are also properly chargeable to overhead.

The real cost of productive hours of man help is his salary cost per month or year, plus his proportion of the overhead, plus the cost of his board, and any other costs like breakages, and privileges, like use of horse and buggy—these all cost real money, whether it appears on the surface or

not—the total sum divided by the productive hours for the month, or better, for the year. Personally, I think Mr. Peck will find his real man hour costs about three times what he has estimated in his cost system card.

The hour cost of working animals must, in similar method, be figured out, computing productive and unproductive hours, feed, care, housing, depreciation, etc. Costly machines should be handled much the same way.

When once the average farmer gets to thinking and figuring along these lines, he will be surprised to learn that he is the most improvident of men. When he begins to keep books on his cows he learns how costly are scrubs. When he gets his cost system busy he awakens to the surprising value of time. He thinks several times before he buys machinery to lie out in the fields to rust 99 per cent of the year.

The farmer is a manufacturer in partnership with the God of Nature. It is a task that calls for the best there is in a man and those who pay the price win success. There are few lines of business that will show a better profit when handled with intelligence and adaptability.

I realize that Mr. Peck allows nothing for selling cost. Other business men count this as a legitimate expense and necessary adjunct, but this is another matter.

Do not think this is a treatise on book and cost keeping—it is not. My only purpose is to provoke thinking and discussion and an exhibition of methods on this vital part of successful farming.

Wayne Co.

A. H. FINN.

FARM NOTES.

What Ails the Alfalfa?

I became interested in alfalfa, and last year sowed a two-acre piece and this year it has a pale and sickly color and is very small. The soil is a well-drained, rich loam. In April we covered it over with 25 loads of good stable manure per acre, plowed it and harrowed it thoroughly until the middle of June. We inoculated the seed according to directions, and sowed it. It came up fine, likewise did the weeds. We mowed it after harvest once. What is the trouble with it, and what shall I do to it?

Van Buren Co.

H. L. R.

Where the soil has been well prepared and sown to alfalfa with proper inoculation with the above noted results, there is little if any doubt that the difficulty is due to an acid condition of the soil which is not favorable to the development of the bacteria peculiar to the alfalfa plant. The writer has had similar experiences with alfalfa, but after applying lime on the same ground, has gotten perfect stands of well inoculated plants. On a field sown last year a portion of which received an application of ground limestone and another part an application of caustic lime, there is imperfect inoculation and a rather small growth of sickly looking plants, while there is a perfect stand of healthy plants where the caustic lime was sown, thus indicating that the ground limestone did not act as quickly in correcting the soil acidity as did the caustic lime. On another part of this same field where ground limestone was applied several years ago, there is a still better and more thrifty stand of alfalfa than where the caustic lime was sown last year. In every other way the different portions of the field were handled in exactly the same manner, so there is no question but that the difference in growth is due to the more complete elimination of soil acidity on the portions of the field where there is now a thrifty crop growing.

As to what can be done to remedy the condition this season, we are not in a position to advise with certainty.

On a field seeded two years ago where a check plot was left without liming, lime was sown after the first cutting last year, and the plants on this strip are now vigorous and well inoculated. Whether this would have been the case on a larger area with perhaps less favorable conditions, we do not know, but this method will be tried again this year in the field above described, by the use of about 500 lbs. per acre of hydrated lime after the first crop is cut. This should be sown when the plants are dry, preferably in the afternoon to prevent injury from the caustic effect of the lime. It would probably be better to work this lime into the surface soil by some means, although it was not done in the instance above noted. It would probably be profitable to try this plan on a portion of this alfalfa at least, and it would undoubtedly be profitable to apply lime before seeding the same or similar land on the same farm to either alfalfa or clover.

LILLIE FARMSTEAD NOTES.

One of the heaviest rains within my recollection occurred on Sunday, June 21, and continued to come today, the twenty-second. All the creeks in the country are at full banks. Some damage has been done by washing. Undoubtedly some crops have been drowned out, some of the late planted corn and beans are covered with water in many places. In a neighbor's field I believe the water is three feet deep in one place. We just finished planting 20 acres of lima beans on Saturday, the twentieth, and this morning I put a man on the field and furrowed it out. The field was not tile drained. We furrowed it out just as you would for wheat or oats. There is no water standing, to amount to anything, on the field at the present time but, of course, it is very wet.

The old saying is, there is no great loss without some small gain. We might change this around in this instance and say that there is no great gain without some small loss, and I feel that is just the way it is going to turn out. To have such a rain as we did Sunday, and we needed it, is a wonderfully good thing. Of course, if it keeps on raining now it will do a lot of damage, but if it clears up, as the indications are, and fairs off, this rain has added thousands of dollars to the farmers' products in this vicinity this year. Late planted corn and peas for the canning factory needed the rain. We needed the rain for the second growth of alfalfa and for pasture, and we got a good soaker, a rain that will thoroughly wet up the ground. Of course, when it dries off it means a whole lot of work in cultivating as soon as we possibly can, but we ought to do this anyway.

We have fairly good prospects in this vicinity so far this season. This soaking rain just now, when we needed it, it seems to me has brightened the prospects and made the prospects brighter this year than they have been before in several years. We were in very good shape for this rain. We had already cut 12 acres of alfalfa and got it all in but a load or two, Saturday night. Of course, if we had worked as we used to, after hours on Saturday night, we could have got it all in, but that isn't the way we do business now. When we stopped at six o'clock there were two or three loads of hay out, but this was well cocked up and I don't know whether it is injured very much or not. It is on a side hill so there is none of it that stands in water, that is sure. But we got in a whole lot of hay that is in prime condition; never had a bit of rain on it at all. This rain will certainly give the second growth of alfalfa a most excellent start. Now we are practically assured of a good second cutting and if we get a third cutting, with the acreage I now have to alfalfa, I don't know where I will

find storage capacity for all the hay. We have got to figure on this sort of thing when we begin to raise alfalfa. We can figure that if we have got ten acres of alfalfa it is about the same as 30 acres of clover, because we will cut it twice and perhaps three times during the summer, and you have doubled or tripled your acreage for hay when you put a field into alfalfa and get a good healthy stand.

The factory man is getting very anxious about the early peas and he wants us to start cutting tomorrow. I am afraid that the land will be so soft that we can't run the pea harvester. We are going to try. There certainly is an immense amount of work to be done now in a very short time. We have all the rest of our haying to do. We have 50 acres of peas to harvest. And we have all the cultivating to do. Besides 75 acres of wheat to cut. One thing, we have all the help we can handle to any advantage and if the weather is at all favorable we can turn off a lot of work in a comparatively short time.

COLON C. LILLIE.

GRAVEL SHOULD BE SCREENED FOR CONCRETE WORK.

In a recent issue of the Michigan Farmer, the writer notes an article on "How to Build a Concrete Silo," in which the question is asked, "What part of cement or sand did he (V. P. Smith) use to make a concrete wall that is below the ground?" The answer is, "one part sand, six parts of ordinary bank-run gravel." This is absolutely wrong, and we only hope that the silo will remain standing and in good condition. The proper mixture, which would have been much more economical for the farmer to use, would be what we call 1:2½:4; that is, one part, one cubic foot, or, in other words, one sack of Portland cement to two and one-half cubic feet of clean, coarse sand, up to and including a quarter-inch in size, and four and one-half cubic feet of clean gravel or crushed stone free from dust, clay and all other foreign material, from a quarter-inch to one and one-half inches in diameter, not larger. Immediately the farmers says: "Why, this is 1:6½ mixture." It is nothing of the sort—any more than if you can put one foot in a No. 7 shoe that you can get both feet into one twice as large.

It is a fundamental principle of good concrete work that the sand and gravel be separated arbitrarily into two sizes. It can easily be done by using a three-eighth inch screen of wire cloth separating the bank-run and pit gravel into two parts. This will allow all the material which goes through the screen to be classed arbitrarily as sand, which is the second part of the mix, and all that is retained on the screen to be classed as gravel, the third part of the mixture. It has been discovered in laboratories without number where thousands of tests of bank-run material have been made, that the average pit-run gravel or bank gravel averages over 70 per cent fine sand. In good concrete fine sand should not be greater than 33.1-3 per cent of the entire mix. It is obvious that as Portland cement forms much the smaller part of any concrete mix, that more attention must be paid to properly separating and proportioning the sand and gravel. Cement is no magic material, and its function is merely to act as mortar, holding together the millions of particles of sand and gravel. If there is too much fine sand, it is quite apparent that the cement will be swallowed up. If the sand is reduced to proper proportions the concrete will be stronger, richer, less porous and often water-tight. The farmer has everything to gain in using his materials properly screened, and everything to lose by not doing so.

Illinois.

H. B. REID.

SCIENCE AND THE FARMER.

Farming is a business embracing many conditions, and these conditions have been summed up by modern investigators and when thus summarized and their relations explained, are appalled the Science of Agriculture.

While the general principles embodied under this head may be, and are, theoretically admissible, their utility when extended to universal practice, must be limited. This limitation is based on the variation of climatic conditions and differentiations of soil. A law of practice that will apply in one locality to a specific climate and peculiar soil, might not be adaptable to a different climate or soil. For these reasons it is not possible to prescribe specific modes or rules that will fit every farm or the practice of every farmer. Farmers of long residence in a certain locality must have observed the climatic phases, peculiar to that section, the adaptability of specific crops, to the prevailing character of soils and seasons. While science may have correctly discovered the essential elements of plant growth, it is not possible to foresee or prescribe the exact element or elements of the land. There are no two soils, even in their virgin condition, that possess the same amount of productive elements, and moreover, if two soils of a different type should contain an equal amount or proportion of plant food the physical condition of one type might prevent an equal availability to plants of the same character.

Knowing just how much plant food a given soil may contain is of but little benefit to the farmer, unless he knows how much is available. The action of growing crops is a guide to the farmer in judging of the amount of plant food available in the reach of the feeding roots of his crops. When plants show a vigor of growth and green that give promise of an abundant harvest, the farmer may judge aright that his crop is finding easy and abundant feeding. On the other hand if his crops lack vigor, are dwarfed and pale, he may be equally sure that they are being starved, though their food may be in the soil, but fenced by textural conditions from the reach of the stunted crop. If an animal is turned into a scant pasture it will be starved or stunted though just over the fence the grass may grow luxuriantly. But of what use is the grass so long as it is out of reach of the animal? The average farmer can easily comprehend the reason why the stunted calf or colt does not grow and thrive in the poor pasture, but he is unable to perceive why his grass or corn, wheat or potatoes, do not grow as do those of his neighbor just over the fence. But it is not always the fault entire of the want of food elements available in the soil or pasture. We will suppose that the pasture on each side of the fence is the same. Mr. A. on one side, believes that by carefully observing the law of the "survival of the fittest" in the breeding of his stock that by selection he can develop superior animals. Mr. B. has no faith in heredity. He believes any kind of stock is good enough, that inbreeding is no detriment, but he can see that his stock is inferior to his neighbors. And the same is true of growing crops. Mr. A. selects his seed corn in the fall, he sees to it that it is gathered and dried and well preserved and tested before it is planted. Mr. B. thinks this is too much trouble and he goes to the crib and selects his seed in the spring. Mr. A. is a progressive farmer, he studies his conditions and labors to improve; he is a success. Mr. B. is the average farmer, who follows the haphazard methods of his father, and his grandfather, it is he who holds the productivity of the soil at a low average. The experiment station, the agricultural college, the farm press, or all combined, may labor to elevate the farm-

er, but so long as the B. class predominate a swift evolution to an ideal agriculture will remain a dream.
New York. B. F. MACK.

OBJECT LESSONS IN POTATO GROWING.

Two upper peninsula railroads are establishing demonstration patches of potatoes along their rights of way. One of these roads has issued a bulletin on potato culture in which "Cloverland" is declared to be ideal for tubers. Farmers are urged to sort and grade their potatoes according to size and color and the Rurals and Sir Walter Raleighs are named as two of the best types of white stock, being square at each end, not too long, and well shaped for baking. The claim is made that Cloverland potatoes have more protein and starch and less water than the average tubers grown elsewhere. Cloverland has both water and rail transportation and is within 300 miles of eight million people.

Members of the Houghton County Potato Growers' Association will plant 1,600 bushels of Sir Walter Raleighs and Irish Cobbler this season. Inquiries for pure-bred potatoes are already coming in from Illinois, Indiana and other states, and Houghton hopes to become the banner potato county of the country. It has been difficult to get pure-bred seed. Much interest is being shown in the corn and potato contests put on by the copper country fair.

The Palatka school in Iron county has extensive gardens and an order was placed for 24 bushels of Sir Walter Raleigh potatoes, but only 12 bushels of pure-bred seed could be secured.

Five carloads of seed potatoes from Wisconsin have been distributed among the farmers of St. Clair county by L. V. Crandall, the county agriculturist, Eurekas being the early variety selected and the Green Mountain for the late crop. In addition the U. S. Department of Agriculture has sent into the county 10 different varieties of potato seed and careful tests will be made to show which variety is best adapted to soil and climate in St. Clair county.

Kent Co. ALMOND GRIFFEN.

THE FARM LANE.

On many farms a lane is necessary on account of the arrangement of the buildings and fields. The lane should answer the purpose of a driveway but should not mar the appearance of the farm, as many of them do, and there should be as little loss of land as possible but it is not advisable to practice economy too far in this direction. Just the other day we saw a lane built with the sole idea of economy. It was very narrow, too narrow to pass through with a large load of hay; and hogs in going to and from a pasture had stopped at various wet places and rooted wallows. A rail fence lined each side against which snow drifted in winter almost as high as the fences.

Another lane we recently saw was 24 feet wide, with a smooth wire fence on either side. A grade 12 feet wide was covered with gravel wide enough for a wagon. On each side of the grade a ditch had been cut several years ago and it is now well settled, as is the space between it and the fence. This lane is treated as a permanent pasture and the grass is always kept short. There are no wet spots in this lane to tempt the hogs to root out a wallow, and no fences to catch the snow. There is a gate at either end of the lane so that stock can be kept out during wet weather when the animals would injure the graveled roadway. Recalling some other farm lanes, this lane is of pleasing appearance and adds to the value of the farm, since a lane is necessary.

Indiana. W. F. PURDUE.

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Live Stock.

Summer Care of Live Stock.

IN one respect at least, the growth of the dairy industry in Michigan has had a beneficial effect upon our live stock industry in general. Farmers who sell milk, even in a small way, soon learn that, in order to keep the production up to a profitable point, considerable attention must be given to the matter of summer feeding and care of their cows, and this fact has awakened very many farmers to a realization of the no less important fact that the meat producing animals must be given like care and attention during the summer season if the most profitable results are to be secured from their maintenance on the farm.

It is still, however, an all too common sight to see young cattle or sheep pasturing in fields upon which the herbage is so scanty as to not even offer cover for small birds during the midsummer season. Where pastures are stocked to their full capacity in the spring, and, as too frequently occurs, the pastures are grazed before the grass gets a good start, the production is bound to be limited, and when the hot, dry weather of midsummer arrives the pasture fails and, unless supplementary feeding is practiced, the stock barely holds its own or shrinks in flesh, while at the same time, the future yield of the pasture is also shortened by too continuous and too close grazing. On many farms, nothing is done to alleviate this condition until after haying and harvest, when the stock is turned into the future value of the stand of grass off the aftermath, with the result that the future value of the stand of grass is greatly depleted, as was the case with the pasture. When this supply fails, a great many also turn their stock into the new seedings of clover, thus lessening the prospect of a good crop of hay or pasture the following year. Where this kind of management is followed, the result is an actual depletion of the fertility of the farm through the agency of the live stock rather than the building up of its fertility, which is one of the advantages of live stock farming when properly conducted.

The same amount of pasture land handled properly might easily maintain the stock kept upon the farm, but there is no way in which this can be accomplished except by beginning a better practice, and there is no better time to begin it than in the midsummer season. Where the pastures are failing, supplementary feeding will pay with the meat producing animals just as well as with the dairy cows—at least, any animal which it pays to keep upon the farm at all will pay for good liberal feeding at all times. If supplementary forage crops are available, it will pay to feed good hay and grain to tide the stock over the season of short pastures, and give the grass land a chance to produce maximum yields in the future. Or, if this cannot be done, it will pay far better to reduce the stock than to graze fields as closely as is practiced upon the average farm. Where the grass has been permitted to get a good growth in the spring and is not grazed off until it matures, the new growth will come up through the old, and all will be utilized together by the stock during the midsummer season. But whatever method is used, it is essential that plenty of nutritious feed be furnished the growing animals at all times.

Other wants should also be satisfied. Among them water comes first, and a good supply of wholesome

drinking water should, if possible, be provided wherever stock is pastured. If compelled to go throughout the day without water, results cannot be as satisfactory as though it were available at all times, and some arrangement should be provided whereby the stock has access to good pure water, for best results. If this cannot be done, they should be watered at least twice per day.

Attention to the regular salting of live stock is also important. Digestive disturbances are often caused by permitting the stock to go without salt until they are famished for it, and then giving them all they will eat. The better way is to have it like the water, available at all times, but where this is not done, attention should be given to the regular salting of all animals at frequent intervals.

Another thing which is quite important is the matter of shade. It is nothing less than cruel to compel the stock to lie out in the hot summer sun throughout the day. Sheep particularly, suffer from such exposure. While there are objections to trees scattered promiscuously throughout the pasture lot, a small clump of trees for shade will prove most beneficial. If this is not available, cheap shelter can be erected, such as is shown in



A Roughly Constructed Shed will Provide Needed Shade for the Flock.

the accompanying illustration, which will answer a very good purpose for sheep, or even hogs.

Necessity compels us to give attention to all the physical wants of our live stock during the winter season, and we have all learned the necessity of providing for them in order to make winter feeding profitable. Many farmers, however, have yet to learn that it is just as essential to the profitable maintenance of live stock upon our farms to satisfy all these physical needs during the summer season. We cannot turn the live stock into the back pasture and forget all about it until fall and secure profitable results. Good care during the summer season will prove quite as profitable as good care during the stabling period, and will prove beneficial both to the farmer's pocket-book and to his land.

Oakland Co. A. R. FARMER.

HOW TO SECURE MORE FOALS.

Probably the biggest problem confronting the horse breeder is to get the mares in foal. Among domestic animals the mare is the most shy breeder of all. Dr. Carlson, of Nebraska, who has made a study of horse breeding conditions that is no doubt more thorough than ever made by any other man, says that the percentage of breeders among mares is only 47.

Both the mares and stallions are to be blamed for this condition. We have done wrong in the past by blaming the stallion too much and the mare too little. Mare owners are too apt to place the blame entirely upon

the stallion and thus they will take their mares from one horse to another, perhaps with equally poor results. If they had looked for the cause within the mares themselves they might have been able to correct it and to make regular breeders out of shy breeders, or ones supposed to be actually barren.

For best results both stallions and mares must be in the most perfectly natural and normal healthy condition. Such minor diseases as influenza interfere very seriously with breeding powers. Animals of either sex, having any of the minor ailments, such as that, should not be bred until recovery is complete.

One of the chief causes of sterility in stallions is lack of exercise. The stallion is the strongest, most virile of our domestic animals. When broken they can be worked with the utmost satisfaction. As a result they not only get more foals in a season, but last for a great many years longer thus probably more than doubling the number of foals begotten in a life time. Much of the criticism of the pure-bred horse as lacking virility can be traced to a lack of work. The scrub with which the pure-bred is compared is invariably worked. The pure-bred having cost a high price is handled as if some sort of a glass toy and in about 95 cases out of 100 is not worked. It very commonly happens that the scrub is quite a sure breeder and the pure-bred is not. The cause is in the care given the pure-bred rather than a natural lack of virility.

The feed is an important factor with both stallions and mares. Those feeds that put the animals into the

such mares to breed is that the mare is so much reduced in vitality that she will not mature another ovum sufficiently for conception during that season. By breeding on the seventh or eighth day the ovum that had started before parturition will be fertilized.

The age of the mare also has considerable to do with getting her in foal. The fourth year has proved to be the most difficult on account of the dentition or teething process that is then taking place. By far the larger number of foals are from mares between the ages of five and 11 years. Quite a number of mares breed with considerable regularity and produce good colts up to the age of 20 or more. However, only about 20 per cent of mares above the age of 15 produce foals.

Minnesota. H. E. MCCARTNEY.

GROWING LAMBS UNIFORMLY.

One of the most important factors in the management of the growing lamb crop is to promote uniform flesh and bone formation. Uniformity possesses economic and commercial value when the lamb crop is ready for marketing, as the market will respond with the top price for stock possessing uniform growth and development. As a general rule, farm grown lambs are deficient in essential uniformity demanded by the market, consequently discriminated against to the loss of flock owners. A little attention to a few essentials in the handling of the growing lamb crop will do much to promote uniformity which at market time will add materially to the selling value.

Ewes, despite good management previous to mating and during the pregnant period, drop their lambs several weeks apart, thereby making several weeks' difference in the ages of the lambs. This difference in ages cannot be altogether remedied, however, if extra attention is directed to giving the lambs plenty of highly palatable and nutritious food they will come along at a surprising rate and at weaning time evince no material difference in physical conformation. Then, too, ewes vary somewhat in ability to suckle their progeny. Some ewes in the flock produce a strong flow of nourishment, consequently encouraging their young to make rapid growth while other ewes equally as well cared for evidence their inability to produce sufficient milk to their young in the unthrifty appearance of their lambs. Ewes of the latter type should be marked and discarded as unprofitable individuals.

Growing lambs, to make rapid bone and flesh formation, must be well fed. During no time of their lives should they want for food. To supply this essential need attention must be paid to the use of supplemental forage crops for summer and early fall feeding. Meadow pastures are likely to suffer from mid-summer drought, consequently can not be relied upon to supply the lambs with necessary feed. The pasture upon which the main flock grazes is not sufficient to encourage the growing lambs to make rapid and uniform growth as the forage lacks readily digestible food nutrients and palatability. Growing lambs want tender, easy digestible and highly relishable forage.

There perhaps is no better forage crops adapted to our soil and climatic condition and suitable for growing lambs than rape, June clover and mixed pasture. Where a small patch of June clover can be fenced off near the main pasture it will furnish the best of forage for the lambs. But it is very doubtful if it pays to depend alone on forage to promote uniform growth in the lamb crop as all quick growing forage is deficient in nutritive elements. Best results are obtained when forage pasture and a light grain ration are combined.

Shiawassee Co. L. C. REYNOLDS.

Dairy.

CONDUCTED BY COLON C. LILLIE.

WHY FARMERS SLAUGHTER THE CALVES.

It is really amusing to read about much of the advice given to farmers by the daily papers with regard to the question which is being discussed of late all over the country, the cause of the high price of beef. They almost invariably advise the farmer not to sell his calves for veal but to grow them for beef animals. Politicians discuss such questions as this before city audiences. They rarely discuss them before farmer organizations. They have gone so far as to propose a law compelling farmers to grow their calves to two years of age before they sell them, thus producing an abundance of beef, and producing them chiefly for the benefit of the consumer at large. Why not pass a law compelling the manufacturers of reapers to produce twice as many and sell them for one-half the price so that farmers can get their reapers cheaper? Why not pass a law compelling the manufacturers to produce twice as much cloth, so that the farmers can get clothes cheaper? One is just as fair as the other, and it is the same sort of a proposition. Take the de-

ture he follows, providing he gets the desired profit out of it. He is just like any other business man. There is no particular difference. It is amusing that the business man in the city, the manufacturer, the lawyer, the politician, and everybody seems to think that they know more about the farm than the farmers themselves. Why don't they go out and buy a farm and show people how to do it? You say many of them do. Yes, and 90 per cent of those who leave the city and go out and attempt to farm, make a dismal failure of it.

A farmer, most certainly, is going to raise veal if he can get more out of it than in some other way. Every farmer, like everybody else, is after profit. Some farmers are willing to work for nothing and board themselves, but the most of them are after some crop or some branch of agriculture which will bring in profits commensurate with the time and labor and capital necessary to produce those crops. A farmer grows sugar beets, in many instances, in preference to potatoes, because it is surer there isn't the risk because the market is established. Likewise the farmer keeps cows upon his farm, not because he likes to confine himself to the arduous business of dairying, but because it is safe, because we can depend upon it, and some such business is necessary that he pay his current expenses and meet his bills. If he could make more by keeping his calves until they were two years old

venture the assertion that there will be more calves raised and grown into beef animals than there are now, and yet, as I say, the farmer is always limited by the crops which he produces, the hay, the grain, the pasture, and also his stable accommodations. He can only keep about so many cattle.

Dairymen Cannot Afford to Raise Calves.

With the men engaged in the production of market milk the case is different from the ordinary farmer. It is absolutely necessary for the market milk man to sell his calves. It would be foolish for him to attempt to raise many of them. What could he do in producing cows, young growing stock, heifers. He has no time to take care of them. He figures that he can buy them cheaper than he can raise them and there isn't any question but what he can. Many farmers who are not so situated that they can sell their milk for market milk purposes grow heifer calves to supply the market milk men. And as the price of milch cows advances more farmers will raise heifer calves for this very purpose. So the law of supply and demand works out here as well as elsewhere. Assistant Secretary of Agriculture Galloway is absolutely right when he says the farmers of this country will produce all the beef the people want, providing the people are willing to pay a sufficient price for that beef so that the farmer can make as much profit out of that as he can out of other lines of agriculture, and they never will produce this beef until such conditions exist. That's all there is to the question. It doesn't need any special law. In fact, laws upon a question like this would not be tolerated in free America. No thoughtful man of good judgment would advocate such a thing at all.

HOW MUCH DID THE SILO SETTLE?

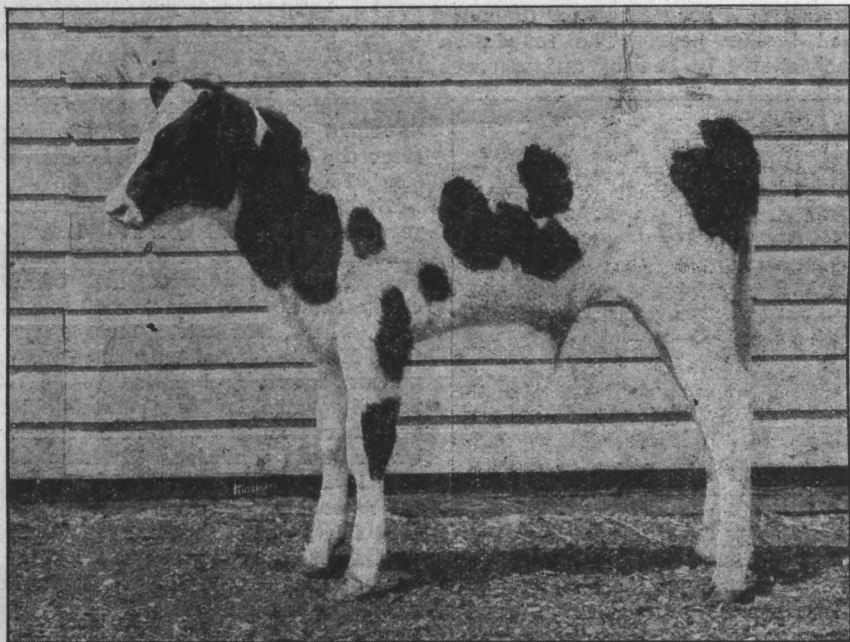
I have two silos, side by side, in barn, 8½x12, 30-ft. staves, corners cut each 2 ft. from corner. The silos are boarded up 5 ft. higher than the staves. They were filled full and kept well tramped by two men. How much silage in one?

Lenawee Co. J. B.

It is very difficult for me to even give anything like an accurate estimate of the amount that the silage was settled in the silo. So much depends upon the condition of the corn when it is put in, whether it was pretty ripe and a little dry, or whether it was green and contained the full amount of moisture. If corn is put into the silo when it is mature and contains the normal amount of moisture it will settle very much more than it will if it is left a few weeks longer and ripens up, and part of the moisture evaporates.

If you wet the top thoroughly and put a considerable amount of water on the top, this will make ensilage settle. As a matter of fact, no one can tell very accurately how much this silo would settle until they knew some of these things. The probability is that a silo of this character which is 35 feet high, would settle eight feet or more, depending, as I say, upon the condition of the silage. Something depends upon how it was tramped when it was filled, but two men in a silo like this ought to keep it well packed, and that makes some difference, but it doesn't make as much difference as the condition of the silage when it was put in. Get the cubical contents of one of these silos, and deduct the corners, as you have estimated, and you will have the contents, which is probably correct. In a silo of this character and this size, I think it will be fair to estimate 40 pounds of silage per cubic foot.

You can no more build a good herd out of poor cows than you can a good house of poor bricks. Get rid of the poor cows.



Holstein Bull Calf Sold at Chicago Sale for \$20,000.

mand for reapers. That demand will be supplied by the enterprising manufacturer because he can make a profit out of it. The demand for clothes will be supplied by the manufacturer because he can get an extra price for the cloth which he produces. And so there is a great demand for beef, and that beef can and will be supplied by the farmer because it will be profitable for him to do it. We have no more right to compel the farmer to produce agricultural products abundantly so that they can furnish food for the people, than they have to compel the manufacturer to produce his wares cheaply for the benefit of the people. Take the advanced cost of household utensils and other high cost of living, as well as food products. It is the great law of supply and demand. One takes care of the other if they are left alone to work out their natural relation.

Selling Calves More Profitable than Raising.

The farmers usually raise all the calves that they have hay and grain and pasture for, or all that they have barn room to accommodate. They will certainly do this if it pays as well to raise these calves as it does to sell the grain, or it does to raise hogs, or to raise any other food which can be raised upon the farm. It doesn't matter what particular branch of agricul-

he certainly would make a great effort to keep more than he does.

Consumers Desire Veal.

A well-fattened calf from four to six weeks, and even two months old, that has had all the good wholesome new milk it could consume, makes a very toothsome food. It tastes better than old beef, and people who can afford to buy what they like, prefer to buy good veal to poor beef, and they are willing to pay a greater price for it. Consequently veal calves sell for more money than beef cattle. One can turn his calves into veal at six to eight weeks of age and get his money and make a larger profit off from this money invested than he can if he raises this calf until he is two or three years old, or if he attempts to make beef out of him and keeps him until he is a year old, taking everything into consideration. Most farmers are selling all the calves that they can spare for veal. They get more profit out of veal than they do out of beef.

Very few farmers allow the element of sentiment to enter into their business. It is a cold-blooded business, very much the same as manufacturing or anything else, how to make the most profit out of the labor and the investment. You let people stop paying higher prices for veal than they do for other beef, and I

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Poultry and Bees.

KEEPING TURKEYS IN CONFINEMENT.

The popular understanding of success in rearing turkeys implies that free range is a necessity. Turkeys and confinement are not supposed to go together. The great objection to keeping these profitable fowls is usually summed up in these words: "You can't keep them anywhere. They stray away and get lost," or they annoy the neighbors, refusing to remain upon their own domain.

Here in California they do things differently. It is true they have whole ranches devoted to growing Thanksgiving birds, where they roam by the hundreds over fields of alfalfa and stubble. There are also other growers who are successfully raising them on a city lot. Note the contrast. It was not a little surprising to hear the sound of a little turkey's "quit, quit," as I was passing along the street not half a dozen blocks from one of Los Angeles' busiest corners. Pausing to look through the wire fence I saw half a dozen little speckled fellows picking away at a tiny alfalfa patch, while the mother, with cautious tread, paced up and down, keeping guard after the manner of all good turkey mothers. Inquiry revealed the fact that it is nothing unusual to find the same conditions in other places, and later I talked with a woman in a small suburb of the big city who raises from 10 to 20 turkeys every year on the back part of her lot, a space measuring not over 50 feet square. Last year she raised 14 to maturity, selling them at Thanksgiving, alive, at \$5 to \$6 each. This year she has already 10 big enough to show the red on their heads the first of June. In one corner of the lot is the alfalfa patch which furnishes the green food necessary. Lawn clippings are also fed the fowls, in addition to the regular ration of small grain.

Keep Healthy in Confinement.

"And your turkeys keep healthy in such small quarters?" I asked.

"Perfectly healthy," was the reply. "I keep the same mother hens from year to year and seldom lose a young one." Sometimes the mother and her young are allowed the freedom of the garden patch, where they pick up insects and wander around. If well fed, a turkey rarely does much damage to growing vegetables. They pick, but do not scratch.

Another woman whom I interviewed keeps several mother hens and a gobbler. She confines her operations to hatching, selling the chicks when a day or two old, at 25 cents each. At four weeks old they would bring "six bits" apiece, so she told me. Like the first one, she has only a city lot for her turkeys. As it never rains from May to November, turkeys thrive exceedingly in this country. No matter what you wish to do, you can always bank on the weather in summer time.

Intensive Poultry Culture Successful. When it comes to eggs these city lot poultrymen (or poultry women) can do more business than a half dozen farmers. Five hundred laying hens is not unusual in such a plant, and they lay, too. There is no lazing around, but every hen does her duty. They have to. They are fed scientifically, a ration calculated for just one thing, to make eggs. When the age for most profitable egg production is passed their places are taken by younger fowls, and they go to market. Efficiency is the watchword, and all operations are on a scientific basis. The cockerels are separated as soon as sex can be distinguished, and from that time on are fed for broilers, going to market at about ten weeks. The

pullets begin laying when about five months old.

As near as I can judge from what I have learned about it, intensive poultry culture in California is a profitable business. It is a great industry, too. The quick returns and small capital required make it very attractive. Like Petaluma, in the north, Inglewood, near Los Angeles, is quite a poultry center and about everybody there is raising chickens and selling eggs. White Leghorns predominate. One sees few of any other breed on the egg ranches. On one half-acre tract at San Gabriel about 7,000 are kept, so I am told.

California. **ELLA E. ROCKWOOD.**

IS THERE MONEY IN POULTRY?

We often hear it asked, is there any money in the poultry business? I can say yes, if it is run on the same business principles as any other business. But there must be a system, and a lot of hard work go with it.

It makes no difference what breed we take, choose the one you fancy most, and in starting out purchase either eggs, day-old chicks, or a trio or pen of as good as your pocketbook can afford. The best is the cheapest in the end. The chicks should be hatched in a good incubator or under good broody hens. The foundation stock should be healthy and vigorous



Blue Ribbon R. C. Black Minorca.

and the chicks should be kept growing from the shell to maturity, or show-room, as you desire. Start the chicks on the common rolled oats for a few days, then use any of the chick feeds that is free from mould or spoiled grains. Feed as many different kinds of grain as you can, as your chicks grow, for a set back at any time during growth will develop in a stunted or undersized bird as well as cause off colors in the plumage. In the Black Minorcas it will cause purple or purple barring and in the white varieties will cause brassiness.

If breeding for eggs, broilers or fancy exhibition poultry, try to reach the highest goal. We get just as anxious to see the show season arrive as a horseman likes to see the race tracks open. We have found the demand for fancy show and breeding birds far greater than we could supply.

One must be a lover of the work to make a success of it. If you don't like chickens, don't go in the poultry business, as one should have a natural interest, and time to study the good points of the birds. For a business success, strict account of all the expenditures should be kept.

It is surprising to find the number of city people at the large city poultry shows who are looking forward to the time when they can get in the country and start in the poultry business. I think that fruit and poultry are one of the best combinations as a business that can be found, if run on good business principles. **H. A. KEISTER.**

MAKING HENS MOLT EARLY.

When a specialty is made of producing winter eggs it is of great importance to have the hens shed their feathers early in the fall, so that the new plumage may be grown before cold weather begins. In case molting is much delayed the production of the new coat of feathers in cold weather is such a strain on the vitality of the fowls that few, if any, eggs are produced until spring, while if the molt takes place early in the season the fowls enter the winter season in good condition, and with proper care and housing methods may be made to lay during the entire winter.

The Van Dresser method of promoting early molt has received several tests, and while many small poultrymen have failed to accept it, which is due to their inability and lack of desire to carry it out in full, the large poultry keepers, who make a specialty of selling large numbers of eggs during the high-priced winter season, give the method full credit of being very good.

Limited Feeding Necessary.

This method consists in withholding food, either wholly or in part, for a number of days, which stops the egg production and reduces the weight of the fowl, and then feeding heavily on a ration suitable for the formation of feathers and the general building up of the system. During the period in which the fowls are underfed, oat bran is fed in hoppers, which is excellent feather food, and the change to the old ration is gradual for five days, after which it is again fed as usual. The bran should be continued, with addition of linseed oil meal to one-third whole weight, for ten days after the feeding of the old ration is started again.

The fowls should be confined within yards or open front houses during the time the method is in use, and should be given plenty of water and fed liberally of the dry mash, beef scraps, corn, wheat, and oats, which is a ration rich in protein or nitrogenous matter, which is believed to be especially valuable for promoting the growth of feathers as well as muscle. Under these conditions the hens will stop laying in a week.

After Molting, Feed for Eggs.

In thirty days a complete new coat of feathers will be put on, and the fowls, if put on the old ration, gradually will begin laying in earnest at once. Rhode Island Reds will molt quicker than Leghorns, but otherwise they take to the treatment alike. But the hens must be mature and not young things, and will enter the cold weather in better condition than other fowls fed continually during the molting season on an egg-producing ration. Success with fowls means feeding the ration with a purpose for the season in which it is fed. A purpose is essential for any success.

New York. **EARL W. GAGE.**

THE EGG EATING HABIT.

The egg eating habit is a bad one, and not easily cured. The probabilities are that it is first caused by a broken egg in the nest, or a soft shell one found on the roosting board in the morning. After once getting a taste of their own product, they want more, and will break every egg they can find. When one discovers that the hens are eating their eggs, strenuous measures should be taken at once. Scatter china eggs on the floor of the coop in order to let them see that all eggs cannot be broken. You will find that they will pick at these for a time and then desist. Feed plenty of meat food for a time, and keep them busy working for all the food they get. If you find a hen actually breaking an egg, better have her for dinner. Watch the hens closely until the trouble ceases.

Horticulture.

APPLE AND PEAR BLIGHT.

One of two things which reports say are doing the most damage to the apple trees throughout the country is the twig blight. The other is the apple tree tent caterpillar.

The amount of damage by blight has been on the increase within the past few years. Last year it did serious injury to many pear orchards and also demonstrated to us that the popular supposition that the Keiffer pear was immune from blight was wrong as the Kieffers were the ones most affected.

The Blight This Year.

This year, immediately after the hot spell we had June 8-9, many of the apple trees in the state showed up a dying back of the twigs. Almost without exception the twigs which died back were those which had blossom spurs on, which goes to show that the infection was through the blossom. In an orchard containing Jonathan, Wagener, Duchess, Wealthy, Shiassee and Baldwin, the Jonathan seem to have it the worst. It was also noticed that old trees seemed to show it worse than the young ones. One grower reports that 95 per cent of the blossoms in one of his orchards was affected this way, and in another orchard which he owned not far away there was very little.

If not taken care of this disease is liable to cause serious trouble. It may, in some cases, kill a third to a half of the tree in a year, as it did last year in the case of a Keiffer orchard in the western part of the state. It usually works faster in pears than apples.

The Method of Treatment.

The method of treatment is to cut out the blighted parts, cutting them at least six inches below where the last evidence of the disease is seen. This should be done to make sure that none of the blight bacteria are left in the apparently healthy wood. The bacteria will be in the wood below the deadened parts before it shows the results of its work. In cutting away blighted twigs the knife or pruning shears should be disinfected after every cut by dipping them in a five per cent solution of carbolic acid. If the larger limbs are blighted the wound can be disinfected by applying a little of the carbolic acid solution to the wound with a sponge. The parts cut off should be carried out of the orchard and burned. When cutting out the twig blight it is handy to have a bag or a basket hung from the shoulders to carry the twigs in.

The blight, whether it is called twig blight, fire blight, pear or apple blight, is caused by the same bacteria and in either case should be treated in the same way.

In any case, where blight attacks trees which are growing good, cultivation should be stopped and fertilizers withheld in order to check the growth of the trees, as it has been found that fast growing trees are usually more susceptible to this disease than others.

-SOOT FOR RADISH WORMS.

A very successful truck gardener recently confessed that he made more money out of radishes than anything else. When asked if he was not greatly troubled with radish worms, he revealed his secret.

After the ground has been fitted up, he makes drill mark of the proper depth for radish seeds, sprinkles a little soot the whole length of them and puts in the seeds and covers them. The crispness and flavor of the radishes seem to be greatly im-

proved by this treatment, while the worms keep at a respectful distance. In fact, this man's experience has led him to make the offer to pay \$100 for each wormy radish in a five-acre field where soot is properly used. The soot has such great forcing qualities that, if the weather is not too dry nor too cool, the radishes are ready for market in 15 days from planting, the root being very large in proportion to the top. He thus has the advantage of harvesting crop after crop from the same ground in one season. He declares that by using soot he can raise good radishes on ordinary plastering sand, provided it is well drained and warm.

Wood soot is preferable to coal soot, although the latter may be used profitably. He has even used a little coal ashes in lieu of soot, but of course, they are not nearly as good.

The home gardener should wake up to this. It is both unpleasant and discouraging to pluck radishes from the kitchen garden and find half of them inhabited.

When cleaning chimneys, stove-pipes, around the oven, etc., store the soot in heavy paper sacks, mark "soot for radishes," and hang up in a dry place.

Genesee Co.

H. L. GRIGGS.

Soot is regarded as a nitrogenous fertilizer, containing on the average, about three per cent of nitrogen in form of ammonia compounds. On account of its dark color it absorbs heat when sprinkled on the surface of the soil. It also has insecticide value and is therefore of value in preventing the radish worm. The fertilizer value, the insecticide value and its power of heat absorption would tend to make it produce large crisp and worm free radishes, as suggested in the above article.—Eds.

GETTING THE MOST FROM THE APPLE CROP.

In these days when apple growing has become a specialized business, and with the increased production from new orchards which will make the profits more moderate than in the past, it behooves one growing apples to grow the highest quality fruit in the most economical way and to sell to greatest advantage all the products of the orchard.

Some practice false economy by neglecting a spraying or not doing it thoroughly enough, and in that way not producing as high quality fruit as possible. Such economy is a case of penny-wisdom and pound-foolishness, as the highest quality fruit pays the best. True economy consists of using labor-saving machinery and having things arranged so that the necessary work of the orchard can be done in the quickest time possible.

Many also fail to take advantage of their opportunities by not grading and packing the fruit carefully. Careless pickers will often be the cause of a crop selling for less than it should. Methods of marketing may also make a difference in prices received for fruit.

Probably what most growers, even those who grow apples intensively, least consider is disposing of their cull or cider stock. Most all will sell this stock to buyers at the current price for such grades. Few realize that with a small investment they could get a cider mill suitable for their purpose and make cider vinegar or good sweet cider. There is a very great demand for high quality real cider vinegar and sweet cider.

The fruit need not be put through the mill when everybody is busy harvesting the fruit, but it can be piled up and when harvesting is done the

cider press started. If high quality sweet cider is desired, the cider can be put in large jugs or kegs and tightly sealed, and then, any time during the winter the clear juice can be siphoned out, heated and put into bottles and sealed. There are unlimited possibilities in working up a trade for such goods, and if rightly handled would net a price for the cider apples which would nearly be equal to that of the good stock.

At the usual prices for cider apples they barely pay for their handling; they are not an asset to any orchard. If handled in some way as suggested above, they would at least pay a good share of the harvesting expense which those who have kept books say is fully half of the cost of growing and selling apples.

FIGHTING PEACH YELLOWS.

While peach yellows has been present in Michigan for 50 years, or more, and its appearance is well known in most of the counties in the southern part of the Michigan peach belt, there are many sections where during the last few years peach trees have been attacked and killed by it, and the nature of the disease has not been known by the owners.

Although the nature of the disease is not understood, it is insidious in its attack and always proves fatal. Although highly contagious, experience has shown that it can be held in check and the loss of trees in large orchards kept within one per cent if careful examination of the orchards is made every week or two during July and August, and any trees which show the presence of the disease are destroyed.

The Symptoms.

In bearing trees, the disease manifests its presence by the premature ripening, and the spotting and high-coloring of the fruit. At first the disease may be confined to a single peach or to the fruit upon one branch, but in advanced cases the fruit on an entire tree will be affected. The fruit enlarges and colors one to two weeks before the normal time. Upon the surface numerous small, red blotches will be noted from each of which a red streak extends to the pit. In a few days the color becomes more marked, the fruit looks as though attacked by "measles" and the flesh appears to be blood-shot. The fact that the flesh about the pit appears to be highly colored, as is quite common in dry seasons with some varieties, is not an indication of the disease unless red streaks connect the skin with the pit.

The presence of the disease can also be detected by the appearance of numerous, slender, tufted growths upon the older branches which bear numerous small, narrow and pointed leaves. These tufts are most commonly found near the crotches on the larger branches and are an infallible indication of the presence of yellows in the tree. When the premature peaches or tufted growths are found upon a single branch, the entire tree is infected and cannot be saved even though the portions which show the disease are removed.

Cut Down Affected Trees.

It is not known when the disease spreads, but it has been well established that if the infected trees are removed as soon as the presence of the disease can be noted, the dissemination of the disease will be checked. On the other hand, if the trees are allowed to stand until the following spring, the chances are that the number of cases of the disease will be increased ten-fold the following year.

The state law not only requires owners of infected trees to destroy them, but provides for the prosecution of the owners if they fail to do this.

L. R. TAFT,
State Inspector of Orchards and Nurseries.

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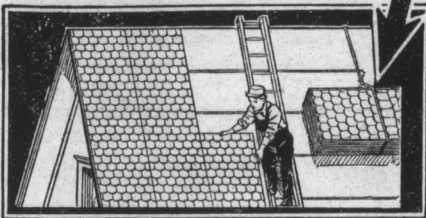
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The Michigan Farmer

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DETROIT, JULY 4, 1914.

A FEW LEADING ARTICLES OF THE WEEK.

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- How to Get More Foals.—Discussing the reason for the failure of mares to breed, and pointing out some simple but effective remedies 4
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- The Sherman Anti-Trust Act and Co-operative Associations.—Illustrating that co-operation among farmers should not be considered in restraint of trade.....16
- Costs and Profits in Fruit Growing.—An itemized account with a representative New York orchard...18

Independence Day.

Young America on the farm as well as in town, loves to give noisy emphasis to his regard for his country's natal day.

The toy cannon pictured in our cover design suggests the mighty implements of war-fare that enable the nation to enforce respect for its citizens and its flag—to command peace.

The boy surrounded with the instrumentalities of education and training, of scientific research and of progress, suggests the strong intelligent manhood that constitutes America's real power and most splendid distinction and that upon which the very existence of the Republic depends.

The Indian represents the passing of a most picturesque people who at one time roved at will over all America as one vast hunting ground: but now are limited to the narrow confines of a few reservations. Wondering the Indian studies the child and his surroundings, trying to comprehend the proverb that "knowledge is power"—an eternal riddle to the savage mind.

No single word in the language so thoroughly and completely expresses an acceptable and satisfactory status as the word peace.

In the home, in the community, in the nation, in the world, it is the requisite of tolerable conditions of life.

Where a nation or a race is steeped in ignorance and held in the bonds of an ecclesiastical or land slavery, peace may mean only a continuance

of the reign of ignorance. To such a people, war may be the only portal to enlightenment and progress. It has sometimes happened, also, that war in some degree has opened the way to enlightenment, as the Crusaders carried back to Western Europe, the basis of the mathematics of Arabia and a smack of the learning of the Orient and the far East.

But the highest realization of the ideals of life, will undoubtedly come to the nations whose governments are founded upon a broad basis of enlightenment and justice—"government of the people, by the people, for the people"—and whose people are "at pace among themselves and with all nations."

CURRENT COMMENT.

The Safe and Sane Celebration.

During the past ten years there have been 1,326 deaths and 35,505 injuries resulting from the use of explosives in the celebration of the "Glorious Fourth." The high point in fatal injuries was reached in 1909, when 215 deaths resulted from such injuries. The number of fatalities has since steadily declined, the fatalities for last year numbering but 32. This has, no doubt, been largely due to the development of the safe and sane idea of celebrating the national holiday. It has also been due in part to the better education of the public to the necessity of calling a physician to treat such injuries, even though they may not seem to be serious at the time. Physicians are also more thoroughly aroused to the danger of tetanus developing in patients who have been injured through the agency of explosives, and are more generally equipped with the proper serum for the effective prevention of this dread germ disease.

While it is too much to expect Young America to celebrate the Fourth without some noise of explosives, every precaution should be taken by parents to direct the celebration as much along safe and sane lines as possible, and in the event of even a minor injury of little seeming consequence, have the wound dressed by a physician without delay. Such general precaution will have the effect of further reducing both injuries and death as a result of over zealous celebration by embryonic patriots.

Changing Work.

Years ago the exchange of labor by neighboring farmers was very common, and in many sections of the country this form of neighborhood accommodation is still practiced to a considerable extent. In matters of this kind the average farmer does not like to appear "small" and he will often discommode himself to help out a neighbor who needs extra help, to secure a crop or do some special task. Usually no account is kept of this sort of exchange, and quite often it would be found that such an account, if kept, would not balance at the end of the season. In one instance noted in the Farm Management Monthly, issued by the Department of Agriculture, a farmer living on a 67-acre farm helped his neighbors to the extent of 217½ hours of man labor and 112 hours of horse labor. In return he received 103 hours of man labor and 76½ hours of horse labor. No mention is made of any further settlement with these neighbors whom he helped to this extent. The probability is that he never figured the proposition out to see how much he was the loser in this exchange of labor. If he had done so, and had figured man labor at 15 cents per hour and horse labor at 10 cents per hour, he would have found that he had contributed a balance of labor which at the above valuation would amount to \$20.76.

Exchanging labor with one's neighbors is often desirable. In fact, it is one of the best methods of solving the

vexed labor problem in many cases. But "even exchange is no robbery," and where the exchange of labor is not even it is only good business, and not in any way "small," to render a bill for the settlement of the balance. As a matter of fairness and good business a record should be kept of all transactions of this kind as well as of the other business incident to the conduct of the farm.

The premium list for the Sixty-fifth Annual State Fair is now out, and shows liberal awards in all departments, particularly those in the live stock classes. An innovation is noted in this connection in the offer of a special premium to breeders' associations for each lot of 50 head of live stock entered by members of any breeders' association through the medium of the association. In addition to the usual provision made for the comfort of fair visitors, a well equipped hospital will be maintained on the grounds, in charge of skilled physicians and trained nurses, to insure prompt care of all who need it.

The fair this year will be of sufficient length to give every person in the state ample opportunity to select a convenient date for attending, the dates being September 7 to 18 inclusive. Upon the character of the State Fair the agricultural prominence of the state is judged by many people. The management of the State Fair has planned for an extensive exhibit, and provided in every way possible for the comfort and entertainment of its farmer patrons. The representative character of a state fair is, however, largely in the hands of the farmers and stock breeders who are in a position to exhibit creditable products at this show, and it is the duty of the farmers of the state to second their efforts by putting up not only the best exhibit which has ever been seen in Michigan, but a better exhibit than will be seen in any other state this year.

Send for a premium list if you have not already received one, and do your share toward insuring a representative exhibit in every department.

HAPPENINGS OF THE WEEK.

National.

Nearly one-half of the city of Salem, Mass., was destroyed by fire last Thursday. Fully 1,000 homes and several important industrial plants were burned, entailing a loss estimated at from \$6,000,000 to \$8,000,000. Fully 10,000 persons were rendered homeless by the fire.

A cyclone swept across Michigan Saturday night, hitting two sections and doing much damage, the aggregate reaching into the hundreds of thousands of dollars. At Unadilla 15 persons were injured, 12 houses blown down, one church ruined and another unroofed, 15 barns demolished, and a score of orchards uprooted. Every cottage at Silver Lake, in Dexter township, Livingston county, was blown down. A number of communities about the two places mentioned, report further destruction of property. The presence of two cases of bubonic plague in New Orleans is causing much apprehension among the authorities, and a conference of the local and state officials regarding means of preventing the spread of the malady, was held early this week.

West Virginia has voted to eliminate the saloon, by a majority of 92,000, which is approximately a two to one vote for statewide suppression of the liquor business. She is the ninth to be added to the list of prohibition states.

Two thunder showers accompanied by hail are said to have destroyed 50 per cent of the grape crop in the Lake Keuka section of New York state. The loss is estimated at \$1,000,000.

A cloudburst at Lanesboro, Minn., inundated the streets of the town to a depth of six feet. Although the water rose rapidly, rescuers are believed to have gotten all the inhabitants to safety.

A new record was made when aviator Silas Christofferson flew over Mt. Whitney, Cal., last week, taking his machine to an elevation of 15,728 feet.

As a result of an attempt of some unknown parties to use cattle for ad-

vertising by painting signs upon them, a large number of the animals have died, and farmers are appealing to the sheriff of Kent county to assist in finding the guilty persons.

The total of Michigan's delinquent taxes for this year aggregate \$360,000 according to the auditor-general's office.

Foreign.

Calgan, a city 125 miles northwest of Pekin, China, was sacked last week by 6,000 mutinous troops. Many persons who resisted the troops, were killed.

Archduke Francis Ferdinand, nephew of Emperor Francis Joseph of Austria, and heir to the Austrian throne, and the Duchess of Hohenburg, his wife, were assassinated at the capital of Bosnia, Sunday. The assassin is said to be a young Servian student. This was the second attempt of the day upon the lives of the royal party. The tragedy makes Archduke Charles Francis Joseph heir-apparent to the Austro-Hungarian throne.

Last week the Mexican rebels captured Zacatecas, the last of the strongholds before Mexico City. Preparations are being made for a rapid advance upon the capital of the country which, if taken, will probably mean the end of Gen. Huerta's administration.

Japan declines the offer of the United States for a new treaty relating to the controversy over the Californian alien land law. It appears that the new Nippon government is attempting to make political capital of the affair, denouncing the new California law as being unfair and mortifying.

STATE FAIRS.

- Forest City, Cleveland, Ohio, Aug. 20-27.
Iowa State, Des Moines, Aug. 26-Sept. 4.
New York State, Syracuse, Aug. 31-Sept. 5.
Ohio State, Columbus, Aug. 31-Sept. 4.
Greater Michigan, Grand Rapids, Sept. 2-7.
Michigan State, Detroit, Sept. 7-18.
Minnesota State, Hamline, Sept. 7-12.
Indiana State, Indianapolis, Sept. 7-11.
Wisconsin State, Milwaukee, Sept. 14-18.
Illinois State, Springfield, Sept. 18-26.

MICHIGAN FAIRS.

- Tuscola Co., Vassar, Aug. 17-20.
Cass City, Cass City, Aug. 17-20.
Calhoun Co., Marshall, Aug. 24-28.
Caro, Caro, Aug. 24-28.
Gratiot Co., Ithaca, Aug. 25-28.
Huron Co., Bad Axe, Sept. 1-4.
Livingston Co., Howell, Sept. 1-4.
Marquette Co., Marquette, Sept. 1-4.
Thumb District, Pt. Huron, Sept. 1-5.
Greater Michigan, Grand Rapids, Sept. 2-7.
Charlevoix Co., East Jordan, Sept. 8-11.
Deckerville, Deckerville, Sept. 9-11.
Greenville, Greenville, Sept. 8-11.
Michigan State, Detroit, Sept. 7-18.
N. E. Michigan, Bay City, Sept. 7-11.
Sanilac Co., Sandusky, Sept. 8-11.
Arenac Co., Standish, Sept. 16-18.
Barry Co., Hastings, Sept. 15-18.
Emmett Co., Petoskey, Sept. 15-18.
Northern District, Cadillac, Sept. 15-18.
Holland, Holland, Sept. 15-18.
Menominee, Menominee, Sept. 15-18.
St. Joseph Co., Centerville, Sept. 15-18.
Croswell, Croswell, Sept. 22-25.
Clare Co., Harrison, Sept. 23-25.
Clare Co., Harrison, Sept. 23-25.
Cheboygan Co., Wolverine, Sept. 23-25.
Burt, Burt, Sept. 22-24.
Grand Traverse, Traverse City, Sept. 21-25.
Iosco Co., Tawas City, Sept. 23-25.
Lenawee Co., Adrian, Sept. 21-25.
Manistee Co., Onkama, Sept. 22-25.
North Branch, North Branch, Sept. 23-25.
Oceana Co., Hart, Sept. 22-25.
Inter-State, Kalamazoo, Sept. 22-25.
Allegan Co., Allegan, Sept. 29-Oct. 2.
Alpena Co., Alpena, Sept. 30-Oct. 2.
Clinton Co., St. Johns, Sept. 29-Oct. 2.
Copper Co., Houghton, Sept. 29-Oct. 3.
Chippewa Co., Sault Ste. Marie, Sept. 28-30.
Eaton Co., Charlotte, Sept. 29-Oct. 2.
Hillsdale Co., Hillsdale, Sept. 28-Oct. 3.
Imlay City, Imlay City, Sept. 29-Oct. 2.
Otsego Co., Gaylord, Sept. 29-Oct. 1.
Armada, Armada, Oct. 7-9.
Fowlerville, Fowlerville, Oct. 6-9.
Ogemaw Co., West Branch, Oct. 6-8.



Rural Schools of Yesterday, Today, Tomorrow.

Every little while some one speaks plainly and sanely about the farmer's school. While this article has touches of sarcasm, and rebukes the indifference of parents, it holds not a little advice that is at once vital, practical and wholesome.

By FERN WILCOX.

THE term country school has long held a certain fascination for those who know it through years of childhood's experience. Many, too, who never knew its joys and sorrows have conceived a romantic idea of its conditions. But the farmer of today is the one to whom questions regarding the district school are of vital importance. It is not the purpose of the writer to consider either curriculum or method, but rather the buildings and conveniences as they were, are, and may be.

Go back to the American schools of the nineteenth century. Here, on his way to school is a little fellow whom we will follow. We must go along a muddy highway, across an old corduroy road and down the hill to the school house. Eagerly our eyes look ahead for the first glimpse of the school buildings. We see an old dilapidated building, probably a deserted barn. No—smoke issues from a crumbling chimney and a number of children are standing about the door. Our little guide hails them gleefully and goes in himself. It is the school-house.

The master has not yet arrived so we will walk around this old temple of learning. The wood for winter is piled high in the yard. At one end the children have constructed a play house. Otherwise the yard is absolutely bare and as there is nothing else to attract the attention we inspect the building closely.

The walls are gray and weather-beaten by the storms of many years. It has never been painted, but nature has touched it in many places with bits of green moss. Here and there the clapboards are gone and many others hang loose, ready to swing off in the next hard wind. Even a little wind causes them to creak and groan and beg to be better secured. The windows on either side have once been shuttered but now we find only an occasional hinge or part of a frame as a relic of a more prosperous time. The roof is worm eaten and rotting, sags pitifully in several places as if it were getting tired

of sheltering the youthful knowledge seeker.

Here comes the master, and we will enter the building with him. We are cautioned not to fall on the big stones thrown up at the entrance for a doorstep. Now they seem but a stumbling block for careless feet, but in rainy weather they help one to pass over the deep mud. On entering, a great pile of wood nearly bars the doorway.

And now we behold the schoolroom! From the outside we thought it a barn, and our first view of the inside would lead us to believe we were looking upon the poultry department. That long long row of benches around the sides of the room is more suitable for a roosters' perch than a desk for diligent students. And would not the spelling floor be about right for the chickens' running park?

There is a fire in the grate which drives out the morning's chill, but the master tells us it is a poor provision against the cold winter winds. The ceiling and walls are black with smoke which the draughts of the falling chimney have forced back to the children. The walls were once covered with a many colored, large figured wall paper, but it is only under an old print of Christopher Columbus that we can even distinguish an outline of the paper's original gorgeousness.

The girls hang their wraps and dinner pails in a dark little closet by the fireplace. How damp and dirty it is! It is the place where all mischievous urchins are stored away.

The master pounds on the clapboards by the door with his heavy ferule and the children come trooping in. At the door they "make their manners," each boy gives a bow, each girl a courtesy. See the little tots. There are several not more than three years old. They sit on the low front benches and the big pupils climb into the wider ones behind.

One little boy comes in much behind the others, for he ran down to the brook for a drink before obeying

the master's summons. This is his last chance to drink before noon, for water pails are unknown and the fifteen minute recess has not been introduced. In the winter when the brook is frozen over, the children hold snow in their hands until it melts and then suck the water from their fingers.

There are no big boys in school during the summer term, which begins the first Monday in May, but during the winter many pupils from 18 to 21 are seen in the school room. One big fellow looks after the fires this week, while another will do it next week. Woe to the lad who is careless in arranging the coals at night. Matches are unknown and unless some fire holds over night the janitor must take some pieces of green bark as a basket and go some distance to the nearest farm house to borrow more coals. Not a very pleasant task on a frosty morning.

We have no reason to believe that the sweeping of the floor ever troubles anyone very much, for the dirt is so deep that even the shuffling of the children's feet makes a noticeable cloud of dust. Cleanliness seems to have been entirely forgotten in the search for knowledge.

As the morning goes on we notice the pupils furtively glancing at the south window. They are all getting restless and two little tots are fast asleep on the front bench. At last the master dismisses the algebra class and he, too, looks at the south window. The sun finally reaches the noon mark on the sill and we know it is time for dinner. We have observed every nook and corner of this old building so let us pass out, leaving the children to eat their dinners, take our way to the schoolhouse of today, and consider its advancements and problems.

We will examine a schoolhouse of southern Michigan which is typical of most district schools at the present time. The yard is small and slightly shaded. The diminutive schoolhouse

has been painted once. A rickety little woodshed is piled high with debris, some wood and less coal. The roof needs re-shingling for it was badly damaged in a wind storm several years ago.

In an old well is a remnant of what was once a good pump. The handle is broken and the platform over the well is rotted away. The children find it more convenient to carry water from the nearest farm house than to use this broken affair.

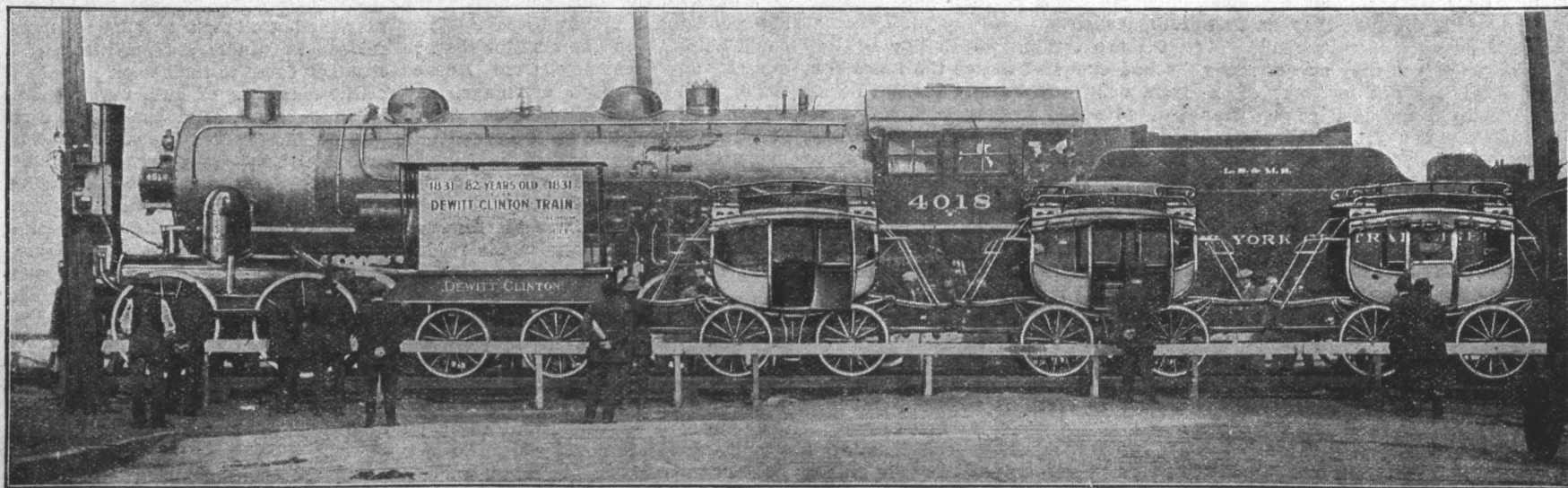
The school building itself is not much larger than the one we left in the past century. The stones at the door have been replaced by a plank step that is falling into decay.

It is vacation time so we may enter and examine things as much as we wish without disturbing anyone. The door sticks and binds, even after we have succeeded in turning the key in the poorly fitted lock, we have to kick and pound before we can force our way in.

There is no hall here. Perhaps the directors got tired of stumbling over wood in the dark passageway; and they never thought of a window. We step at once into the room. Here we find seats and desks for two pupils arranged in rows across the room. They are all about the same size. How uncomfortable even the smallest seats must be for the wee tots, and how could a good sized boy ever store himself away in one of those back seats? Surely many of the children must be either cramped, or stretched every day. The teachers desk is a small table that some obliging farmer has given to the district after the table had been replaced in his own kitchen by a new cabinet.

At one side we find a cupboard filled with books that might better be burned. They were selected by someone with a perverted taste for literature. We find many trashy novels stacked in among old readers and histories.

On the north and east walls are two stretches of blackboard. These were made by the black painting of a putty coat. Long years of use and misuse



What strides have been made in the construction of railroad equipment is shown by the accompanying illustration, where the first train operated in the United States over eighty years ago is standing beside a modern locomotive. The little engine and its three cars scarcely measure the side of the monster iron horse of the twentieth century. The development of the railroad engine has been unlike the development of the racing and the draft horse. With the animals it has been found that beyond a certain limit weight becomes an obstacle to speed and an advantage in pulling. But the evolution of the locomotive has increased both speed and weight at the same time. The little engine of nearly a century ago had a maximum speed of fifteen miles per hour, while the locomotive of today runs four, five and even six times as fast and carries weight a hundred or more times as great as that of its progenitor.

have cracked and broken its surface. Now the teacher must dodge innumerable cracks and holes as she places work on the board.

In the corner back of the door is a little three-cornered shelf which holds the water pail, a rusty old dipper and a rustier wash basin. The place is dry now, but if we should visit this room during school hours we would find this a veritable slop hole. One dipper is not enough for the thirsty youngsters. Much pushing and shoving over cup and basin keep this place perpetually damp. After dinner, in spite of the teacher's greatest caution, there are sure to be crumbs of food, from the lips and fingers of the children, floating in the water.

Under the shelf are the dustpan, stove shovel, oil can, and the general storeroom collection. Seeing the coal shovel prompts us to examine the stove. It is a low, flat heater, running lengthwise in the middle aisle. The door sags on its hinges, one grate has entirely disappeared and the other is badly cracked. The stove pipe is old and rusty so that many small holes may be seen. Even a light wind sends the ashes and soot sifting down on the children's heads.

The walls are lined with hooks for the children's wraps. Under the chimney is a dusty, dirty place for dinner-pails. Several poor maps, which wily agents have persuaded the district to buy, hang on the walls. These maps were not cheap in price but have proven useless. There are some charts too, that were forced on unsuspecting school directors. The agents declared in such glowing, persuasive tones that the charts and maps were necessary to the success of the school that they were purchased at considerable cost, with little regard to their value. The advice of a thoroughly competent teacher on the purchase of supplies would in all probability, have saved the district considerable money.

Let us leave this dingy room and going out into the pure country air, talk over some of the things which will add to the comfort of the children and which eventually must come to them as their rightful heritage. You farmers, who are enjoying many of the most modern conveniences in your barns and homes, must not expect your teachers and your children to do their best work unless they, too, have the best possible conditions to work under.

You spend many dollars, and days of time, in building a sanitary, cement water tank for your cattle, and then let your children drink from a most unhealthful, unwholesome water pail. Manufacturers have on the market, at the present time, several different styles of water fountains which may be used in localities where there is no water pressure. Why do you not look into the matter and select one of the best for your country school? Pure water is not too good for your cattle, and you may be sure your children need it even more.

The water pail is only one of many things which cry out for your attention. We must consider some other hygienic questions that need urgent attention. One great essential is a well drained school yard. Have you one? A stagnant pool of water is a breeding place for disease germs. If there is such a place on your school grounds it should be done away with. When children play in a muddy yard much dirt is tracked into the buildings. This dirt dries on the floor and as the children restlessly move their feet a harsh, nerve-racking sound is produced. The sound, however, is a small part of the evil. This same germ-laden dirt is carried through the air which the children and teacher breathe. Might we not better pay less for the support of tuberculosis sanitariums and more to remove the conditions which make the dread disease possible? When we stop to consider that the child spends seven hours a

ly appreciate the necessity of providing the best conditions for those seven hours.

While speaking of mud I am reminded of the usual method of cleaning the schoolrooms with a broom and feather duster. No matter how careful the sweeper may be, there is always a genuine cloud of dust stirred up. I say "stirred up," for it absolutely can not all be "taken up." This dust settles on walls and furniture and is breathed in all the next day as each little jar or breeze sends it flying through the air. There are sweeping compounds which may be purchased very reasonably. These would help to solve the problem. If you are really in earnest and can not get the manufactured product there are several formulas published by our state board of health which may be prepared at home for a moderate price. A brush of soft pliable fiber will stir up less dust than the ordinary broom. These may be purchased at any hardware store at a cost from 75 cents to \$1.50. A large dust cloth—a rag, if you please, will remove a great deal more dust than any duster that was ever made. Absolute cleanliness must be one of the first requisites in a perfect schoolhouse.

Another thing to be taken into account is the ventilating and heating system. Some schools have found a regular system delightfully satisfactory and practical but every school must have at least the rudiments for ventilating and heating. Even if you can not afford a modern heater, with its patent ventilating device, you must have good wood or coal, a good stove, a perfect pipe properly fitted, a well built chimney, lots of windows, and a full supply of window boards. The new barns all have a ventilating system. Are our children to have less consideration than our dairy cows?

After the physical needs have been supplied we still need to consider some things of artistic value. Many a teacher has come into the district school anxious to make the surroundings beautiful. Some have succeeded but the results can not be permanent without your assistance. Trees and shrubbery and vines will do so much to enhance the attractiveness of the school grounds. If the teacher succeeds in planting these things unsisted there is still work for you to do. The young plants must be cared for during the hot summer days. It often happens that even when trees

survive the lack of care, they are ruined by some careless driver. Does it not seem absolutely cruel for anyone to ride down the result of so much effort on the part of teacher and pupils? Yet every year this thing happens. Tree after tree, shrub after shrub, are driven over and killed before they gain sufficient size to hold their own against intrusion. The next time you are tempted to drive across a schoolyard, do stop and think that you will at least cut up the sod if you do not ruin a cherished plant. Go around, it is only a little farther.

Inside the schoolroom there are two things which will add much to the artistic effect. These are curtains and pictures. Shades should be considered an absolute necessity. I think sash curtains are almost if not just as important. Few of us would like to have all the draperies removed from our homes from nine in the morning until four in the afternoon. Why should we expect our children to be deprived of the same comfort? Sash curtains and rods for eight windows may be purchased for less than three dollars. Do not let school go on another day without them.

It is more difficult to discuss the pictures, but they are just as much an essential. Our children must be surrounded by some of the best things in art if they are to grow up with an appreciation of all that is good and beautiful. When your teacher gives a social to make money for a picture fund, support it with your presence and your pocket-book. The good derived from association with a masterpiece is rather an intangible thing to estimate, but it is no less valuable because we can not absolutely weigh it.

If you have been selecting progressive teachers they have realized many necessary improvements long ago. No doubt they have attempted to bring about some of the required changes. Have you co-operated with them, or have you ridiculed and laughed at their thoughtful suggestions?

The teacher can not do her work alone. She needs your help. Have confidence in her and in yourself. Co-operate to make the school year of 1914-1915 so filled with helpful, useful days that it will stand out as a guide post to further advancement through all the years to come. Put the children and children's welfare before all other things, and you will reap a richer harvest in your farm home than you have ever reaped before.

The Parkers' Independence Day.

By GRACE WHITE NEWBY.

SILAS PARKER wiped the perspiration from his forehead and knitted his brows, as he sat gazing at a roll of bills before him on the little table. This little roll was at once the cause of fond hope and abject despair.

On the coming fourth day of July he had expected to see the home free from debt, and he and his good wife had planned how they would celebrate their own Independence Day, for such it indeed seemed to them to be when freed from the burden they had carried so long. Many times had they come near failing to meet their payments, and had been perilously near the foreclosure of that dreadful mortgage, but by some good fate, were tided over the yawning precipice, and, as the time drew nearer, and when only one payment remained due, they began to feel that their hopes were almost as good as realized. But just about this time a sudden run of ill luck overtook them—the loss of a valuable horse, which necessitated the immediate purchase of another, or the giving up of Silas Parker's employment, for which the keeping of a horse was indispensable. Then the bobbing up of a bill, long thought, by some misunderstanding, to have been paid, but, having nothing to show its

payment, the bill had to be met; and, last but not least, the severe illness of his wife. It seemed the fates had conspired to prevent him from realizing his cherished dream. But here he was, with the mortgage nearly due and not enough money to pay. What could he do? He knew better than to expect any leniency from Horace Page, who held the mortgage, and who was one of that class whose greed for the dollar far exceeded any sympathetic or merciful tendencies which he may have had. And, besides, had he not said the last time he tided him over, it was the last, and one knew when once he made up his mind to anything it was as good as done.

Mr. Parker had already borrowed money to the limit of his personal securities to meet other indebtedness, that he might be enabled to meet the home payment, holding that as the one supreme and important thing on which the others could wait. So now he was virtually at his rope's end.

At this stage of his dejection Mrs. Parker appeared on the scene. Reading plainly the deep lines in his forehead, and the expression written on his face, she walked up to him, laid her hand on his shoulder, and said not a word for a full minute. Then

his gaze meeting hers, she said:

"Silas! I can't bear to see you look so. Is it impossible to meet the payment?"

"Yes, and Just think, Mary, what a disappointment it will be to Rebecca."

Theirs was the old story, of the struggle of the parents to send the daughter through college. They had felt justified in this for she had shown unusual talent and intelligence, and they laid great store against the time when they should realize their expectations of her. Her college course was to be completed in June—in just one short week—and they were to have one common celebration when she returned home on Independence Day. The failure promised to make the celebration anything but a pleasure. But Mary, instilling a measure of cheer into her voice, said:

"Well, Silas, let's leave it with Him who knows best, and think no more about it today—maybe the morrow will bring more light."

Then Mary went about her household tasks, leaving her husband to meditate on the weakness of his faith, for somehow he could not bring himself to the point of laying his troubles in the hands of providence, as his good wife suggested; but, anyhow, her hopefulness reflected slightly in his spirits, and he rose, shak-ink off, to a certain extent, his burden, and went about his evening tasks.

The next morning the mail brought a letter from their daughter, with a little surprise package by way of encouragement to the despairing hearts of Silas and Mary Parker.

For the past three months Rebecca had been doing so private tutoring to a backward high school pupil, whose parents had foreseen the necessity of such help, and had willingly paid Rebecca Parker a stipulated sum for the instruction. So, having accumulated more money than was needed for her own expenses, and thinking it would be a happy surprise to her parents to receive this unexpected sum, Rebecca sent it to them. While it brought not a little encouragement to them, for, as Mary said, "Every little helps," there yet remained the largest portion of the payment to be raised, and the cloud was not entirely lifted.

A week passed, and no visible means presented itself of adding to the amount. The daughter, meanwhile, returned from commencement, happy in the thought they would soon all celebrate their "independence" or "freedom" day, as they were wont to call it. Her parents, not wishing to place a damper upon her recent triumph and happy prospects, tried hard to conceal their anxiety; but, as the time drew near, she fathomed the secret, with a tact, the possession of which belongs to the few. About a week before the celebration, when they had well-nigh reconciled themselves to their disappointment, a stranger came to their door.

The man was, at first, unrecognized by Parker, but, after considerable reflection he (Parker) recalled that he had seen the stranger somewhere. Then suddenly the whole situation cleared. Silas had many years before gone on the witness stand to speak a word in defense for this same stranger. That bit of defense, so insignificant to Silas as to have been forgotten, was of such importance to this man, in clearing him of the accusation of a grave offense, of which he was innocent, that he then and there resolved to return the favor an hundred fold, if it ever lay within his power. There was much of the Indian in the accused man's nature, and, having accumulated a considerable fortune in the far west, he returned home with the resolve still fresh in his breast to compensate his "friend in need." Hence, the consequent visit to Silas Parker, and the smuggling of a neat little roll into his palm.

"It is truly a Godsend," said his wife, as she gently pulled her helpmeet down to a seat under the old tree, to renew their "freedom plans."

Who knows but that the prayers of this good wife had something to do with the inexplicable turn of affairs? Suffice it to say, such rifts in the clouds do often serve as forcible reminders of an All-wise Providence.

The dawning of the morning of the Fourth of July saw three happy souls busying themselves with preparations for a great celebration, and that after-

noon, as Silas Parker hoisted a flag on the little front porch, as a double act of patriotism and rejoicing over their good fate, he turned to his good wife and said:

"Mary, now I don't mean to be unpatriotic, for God knows I would die for my country, and I love Independence Day for its own significance; but do you suppose that assembly of great men enjoyed the drawing up of the Declaration of Independence any more than we do the assertion of our independence from that mortgage?"

Rejuvenating The Farmer's Fourth.

By WARREN F. WILCOX.

IF the celebration of the Fourth of July should be indulged in by any class of people more liberally and patriotically than any other, it should be by the American farmer. The farmers of '76 fired the shot heard round the world and put the English red coats to run."

But how often does the farmer of today, and for the past generation, become only a sightseer on Independence Day? How completely has he dropped out of the celebration of Independence Day, save by proxy, as it were, in his children. It should not be so. But for the farmers who figured in the initial Fourth there would now be no Fourth to celebrate.

The usual method of arranging for the keeping of our national holiday is for the saloons and dance halls of a village or city to make up a purse, spend a few dollars on foot races, a few fireworks and advertise a big celebration. They reckon to take in several times the amount they expend. But the manner in which Independence Day is generally observed is a reproach, and the thoughtful farmer naturally prefers to keep his boys in the hay or corn field rather than take them to mingle with the average Fourth of July crowds.

The little city of Montrose, in western Colorado, held a celebration last year which at once appealed to men with red blood in their veins and overcame the usually objectionable features. The Grange had just invaded the county with four organizations, and being progressive societies every one of the four, when asked to take an active part in the celebration, did so. Moreover the whole celebration was planned with a view to attracting the interest of the rural dwellers more than previously. Believing that participation was the surest way of invoking the deepest interest, farmers were called upon to take an active part in the program.

With this idea in view the committee went ahead on an entirely new line. There were four prizes, aggregating \$50, for grange floats. Each of the granges went into this with vim and the results were surely startling. Riverside Grange won the first prize, having a float showing the steps in the manufacture of an ice cream cone. A real live Jersey cow graced the float, being milked by a milkmaid, while there was a separator, churn, ice cream freezer, etc., in operation. Ice cream cones were given out free and the float was the center of attraction for the boys and girls.

Spring Creek float showed a progressive farm scene, with modern house, spacious barns, granaries, with alfalfa, grain, fruit trees loaded with fruit, and every detail of an up-to-date farm worked out, even to two autos speeding up the driveway before the house, from which floated the Stars and Stripes.

Montrose Grange had a typical farm scene, with farmers pitching hay, all sorts of live stock and produce scattered over the wagon.

Menoken Grange had a float composed of two wagons drawn by six horses. The float was made up of emblems of the Order and was occu-

pied by the officers at their respective stations, a veritable lodge room scene.

While the float contest was open to all organizations and lodges, three prizes were won by granges. This was surely more pleasing to the large farming contingent present than to have all the prizes gobbled up by town people.

The prizes for novelty and commercial floats were of smaller amounts than those won by the granges. Besides, there were four prizes aggregating \$32.50 for the largest and best representation from the country granges which added a great deal to the interest of the farmers. They were further concerned in prizes for the best farm outfit; for the best four-horse rig; best farm team, wagon and harness; best driving team and outfit; best four-mule team; best team of mules, wagon and harness; best couple on horseback under 15 and over 15 years of age.

In addition there were the usual street sports, foot races and such.

Members of the various granges followed their floats in the parade, either on horseback or in variously decorated autos.

Just how much such a program contributes to the permanency of our institutions of government cannot be measured, but the possibilities are so hopeful, and the need so great, that men ought not to hesitate to encourage a like spirit in every community.

NATHANIEL HAWTHORNE.

By AVA E. LAUTENSCHLAGER.

Nathaniel Hawthorne, said by Lowell to be the greatest imaginative genius since Shakespeare, was born in Salem, Mass., July 4, 1804.

His mother was a woman of remarkable beauty and extreme sensibility. Her husband's death so affected her that for thirty years she lived in absolute seclusion, taking her meals in her own room. This had a great influence on the son's career. Shut out in a measure from the world, he became shy and diffident, a dreamer and a lover of solitude. His appearance and personal traits, though, were remarkable. He was tall, strongly built, athletic and graceful, had a handsome face, regular classic features, and a fine, glowing eye, from which shone the light of genius. In spite of his shyness, he was winning and graceful in his manners, and in England he became quite a social favorite. He was of a gentle, sensitive and affectionate disposition.

Prepared for college at Salem, he entered Bowdoin, where he graduated in 1825. His college life was uneventful. In general scholarship he did not rank high, yet he early acquired distinction as a master of English composition.

In 1846 he was made surveyor in the custom house in Salem at a salary of twelve hundred dollars a year. This position he held for three years, after which he resumed his literary work.

In 1853, he was nominated and confirmed as consul at Liverpool. Seven years later, June, 1860, he again returned to his own home. In May,

1864, he started for a trip to the White Mountains with his friend, ex-President Pierce. At the Pemigewasset House, at Plymouth, New Hampshire, on the 18th of May, he passed away. Thus ended the life of one of the greatest writers the country has ever produced.

ON INDEPENDENCE DAY.

By IRMA T. SOPER.

The "Glorious Fourth" has come again With drum beats loud and clear And soldiers old and soldiers young Are gathered far and near.

The bonny flag is hoisted high— A cheer rings through the air— The morning mist still clings to earth— The sky is blue and fair.

Hark, what's the cry? A gathered crowd Stand by a singer's side, Join in a chorus, loud and clear, It echoes far and wide.

A group of children march along, Their footsteps never lag, And as we watch, they march around And form into a flag.

The tiny "crackers" hiss and burst, And while the brass bands' blare, The children long for evening time— The colored rockets' glare.

In town a banquet gay is held, And "Coming-Home" of men, When school mates old and friends of yore Are gathering in again.

Ah! could my tale but ended be And leave them free and glad, But when the evening comes 'twill find Full many a home that's sad.

For not content are they with these Sane methods to rejoice, But many think to celebrate They'll hear the "giant's" voice.

Or shoot a "safe" revolver Which loaded proves to be, Or watch a sizzling lighted fuse To celebrate their glee.

In many homes the morning's dawned So fresh and bright and clear, Where, when the sober evening comes 'Twill find them sad and drear.

And mothers, then, will weep in vain For sight they can't restore, And the father's sigh as they think to hear A crutch beat evermore.

And here a bandaged head is seen— A sleeve without an arm, When morning dawned, these maimed said "I don't see what's the harm."

Oh, parents, as you read these lines On Independence Day, Be sure you use your judgment true And guide the youngsters' play.

For you, in wide experience, Can bar the dangerous toy, And keep in all their youthful charm Your precious girl and boy.

Those men of old dreamed not of this When liberty was rung— 'Twas more a day to be glad and free And praiseful songs be sung.

For flowers bright to strew the paths, And thankful prayers be said, And flags unfurled and waved and cheered

The blue—the white—the red. So make a firm resolve this day, You'll help to keep it bright, That all may still as happy be When comes the silent night.

A RAZOR SNAP.

A good imported German Razor at 35 cents sounds impossible, but while the present supply lasts The Michigan Farmer makes this remarkable offer.

The razors are made of the best German steel, five-eighth-inch blade, and black handle. We will not say just what these razors ordinarily retail at, as prices on razors vary with each dealer, but we have seen razors no better sold at \$1.25 and \$1.50.

Every man who shaves ought to have at least three razors as it is a proven fact that giving a razor a rest is beneficial to it, and here is your opportunity to get a supply at very little cost.

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The churn is kept free from that stale odor if washed with Borax and water. To each quart of water add a tablespoonful of Borax.

The cow's udder is kept in a clean, healthy and smooth condition by washing it with Borax and water.

The milk pail is kept free from staleness, sliminess and stickiness if it is washed with Borax and water. One tablespoonful to a quart of water.

Milk pans are quickly cleaned and rid of all greasy "feel" when washed with Borax and water. Use one tablespoonful of Borax to a quart of water.

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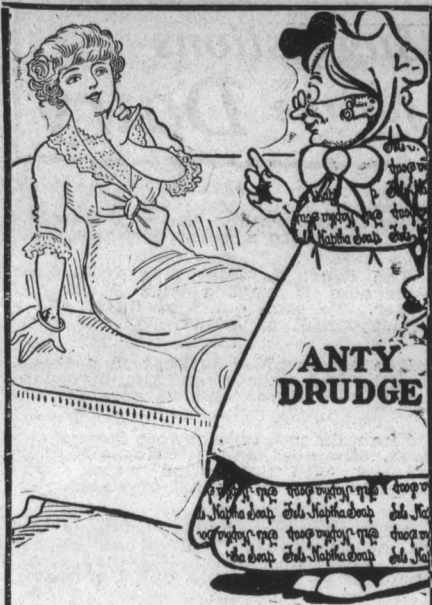
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Mrs. Gay—"Anty Drudge, I'm just delighted with Fels-Naptha Soap. My washing is all done without a bit of steam or smell, and it's such a comfort to know I've gotten rid of the sickening odor of boiling clothes. I use it for John's flannels, too. It leaves them so soft and white."

Anty Drudge—"My dear, you are the third who has said that to me this morning. I'm certainly glad I told you about Fels-Naptha Soap."

You Used to have to boil your clothes to get them clean, but nowadays progressive women all over the country use Fels-Naptha Soap. Their clothes are clean and their work is done in half the time it used to take.

Fels-Naptha works best in cool or luke-warm water, without hard rubbing or boiling. It is especially good for woollens because hard rubbing ruins them, and Fels-Naptha does away with all hard rubbing.

Buy it by the carton or box and follow directions on the Red and Green Wrapper.

Fels & Co., Philadelphia.

FELS-NAPTHA



Thoughtless Inhumanity.

IF man's inhumanity to man has made countless thousands mourn, was her dismay, in stealing an upward glance, to see that her seat-mate was a notorious pickpocket whose pictures had been in every paper and that women ever mean to be inhuman to one another. Far from it. They are either thoughtless or laboring under a false idea of justice, according as the inhumanity takes form.

In the matter of dress alone, how many countless thousands of perfectly good, perfectly intelligent, horribly sensitive women have been made to suffer by the slights of well-intentioned, but thoughtless and cruel sisters? Looking femininity over, doesn't it seem that there are but two classes, those who would rival the lilies of the field in their attire, and those who prefer to "feed the lilies of their soul" by slighting attire and spending the money for more deserving things. And the outward lilies outnumber the soul lilies three to one.

What there is about clothes that makes such an appeal to women, none of us can tell. But when friend husband goes to an "affair" and we have to stay at home with the children, isn't the first query he gets, "What did the women have on?" There may have been a prominent speaker present, but we leave questions regarding his speech until we have found out, if we can, just what each one of our dearest friends wore. Usually we can't, for what man ever knows what a woman's gown is like, except to say it was some kind of shiny stuff, blue, or pink or some color?

Most of us have the bad habit, too, of "sizing folks up" by their clothes. Let a new woman come into the community and we look her over critically as to style before we think about soul. If she wears smart clothes, we are anxious to meet her at once, possibly for herself but more probably so we can get a closer look at her dress. If she is plainly, though neatly garbed, we decide we'll call sometime, and then straightway forget to make the call until she is taken ill, or dies, or moves away from our unfriendly neighborhood.

How much better, if instead of looking at clothes, we looked first at features, searched the eyes, the mouth, the chin, the brow for telltale hints of character. There would be fewer sudden friendships and subsequent bitter quarrels if we studied faces more and clothes less.

Of course, to a certain extent, we are right in estimating people by their attire. A person who is slovenly in matters of dress, who wears soiled linen, down at the heel and unpolished shoes, frayed out skirts and torn waists is more than likely to have similar slovenly habits of mind. Neatness of dress is a pretty good sign of neatness in living, and we make no mistake in looking for that. But when we go farther and demand style, we are getting into the realm of humanity.

A woman, who is by no means a snob, had the lesson taught her pretty sharply a few weeks ago. She boarded a street car, and glancing down the aisle saw but two vacant seats. In one sat a plainly dressed woman, wearing a last year's hat. Further down was a very smartly gowned dame, who simply radiated fashion, part of it the 1915 brand. The newcomer walked past the quiet little woman, and dropped with a satisfied

smile beside the fashion plate. What was her dismay, in stealing an upward glance, to see that her seat-mate was a notorious pickpocket whose pictures had been in every paper and that women ever mean to be inhuman to one another. Far from it. They are either thoughtless or laboring under a false idea of justice, according as the inhumanity takes form.

Many a sensitive, but superior, woman is living a lonely life today, because something about her dress makes her neighbors think she is "queer." If some one of them could be brave enough to overlook the dress and look into the soul, she might find there her best friend, and bring a new and shining light into the community life. Most of us have so little money to spend on clothes and some of us don't know how to spend that little to the best advantage. Why, then, make clothes the standard by which we measure our friends? More often than not, want of clothes is a surer indication of real worth.

DEBORAH.

HINTS FOR THE JELLY MAKER.

BY ELLA E. ROCKWOOD.

Old and experienced housewives sometimes fall short of complete success, and find the jelly they have so carefully prepared is more or less of a disappointment. That just-right condition which all recognize in the quivering translucent mass, seemingly ever on the verge of falling into shapelessness, yet retaining its molded form as it stands upon the crystal or china plate which holds it, is naturally much to be desired. And it is a pardonable pride in her handiwork which impels each of us to strive to put into the common round and trivial task our very best endeavor.

There are certain principles in jelly making, as in other things, which should be observed. One is to avoid over-ripe fruit. A far nicer product results from that which is, of the two, immature.

Acid fruits make a firmer jelly than others. Ripe peaches, for example, produces a soft jelly, while those which are yet hard make a firm article. Currants are frequently disappointing, although as a rule one of the most satisfactory fruits for jelly, because left to become too ripe.

It is immaterial whether the juice is removed from the fruit before it is cooked or afterward. Good results follow either method, other things being equal. If first cooked, only sufficient water to barely cover it should be used. Draining is preferable to squeezing, since the pulp interferes with the clearness of the jelly.

The juice should be boiled, preferably in a broad, shallow enameled pan, for several minutes before adding equal measure of sugar, but the allotted amount should be determined before the cooking begins. Boiling a small quantity at a time ensures better results. Twenty minutes at most should bring it to the desired point. Take out a little in a cold dish from time to time, to ascertain when this is reached. Overboiling is ruinous. If at the end of 20 minutes there are no signs of jelling, but a syrupy condition only when cool, something is

wrong. "Doctoring" it at this stage by the addition of more sugar or further boiling, rarely has the desired result. If there are green apples to be obtained it sometimes works like a charm to cook a few of them, drain off the juice and add it to the syrup.

Sound fruit, not over-ripe, an equal weight of sugar and juice and 10 to 20 minutes' boiling in a shallow vessel, should result in a firm, finely colored jelly. If there is failure, partial or complete, there is a reason for it.

THE VALUE OF "COSY NOOKS" AROUND THE FARM YARD.

BY A. S. CODY.

There would not be so many lonely, neglected mounds in country graveyards with tender inscriptions "sacred to the memory" of farmers' wives engraved upon the headstones above them if the women lying in those mounds, when living, had understood that a little more rest and recreation were all that they needed to prolong their useful lives.

Just as seemingly unimportant marks scattered among the words of writer or printer make those words easier to read and understand, so little bits of rest make life's work easier and more intelligible.

The farmer's wife, especially, is in need of frequent rests for she rises early and goes to bed late. While, with system and energy, she may be able to perform the routine work of the day and leave a fair margin of it for resting, still there are so many outside calls upon her time that she seldom gets it. There is nothing more tempting than a rustic seat placed under a tree near the kitchen door. There she will pause when she returns from field or garden with vegetables or fruit and, while preparing them for the table will be gaining sips of health from the sweet outdoor air, instead of inhaling the stifling atmosphere of the kitchen.

If there is no tree (and I have often been surprised at the lack of them around farm houses), a few poles set in the ground and fastened together at the top, like an Indian wigwam, with an old chair beneath them, will be a pleasant resting spot when quick growing vines, such as morning glory, moon-flower, or just field bean-vines are massed around the poles. A couple of hop vines look beautiful and cover the wigwam quickly, but they are apt to scratch one's face with their rough shoots.

If it can be purchased cheap enough a lounge hammock is an ideal thing to have hanging either on the back porch or in the yard. Now I know most farmers' wives will think that this is a sign of an idle or lazy woman. But there is no place like a flat hammock for giving a pair of tired feet a rest. I have not been a mere theoretic farm woman for thirty years, but have helped side by side with my husband in field and garden, to plant, hoe, gather and market the fruit of our labor and can testify that I found my hammock the very best investment for "first aid to aching body and restless nerves," that anyone can make.

I made my hammock out of the staves of a flour barrel and a couple of pieces of thick wire. Then I fitted it with a pad made from an old bed quilt and had a couple of cushions on it and I am sure the rest that I obtained by means of it saved me many a day's illness.

Farmers' Clubs

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President—Jas. N. McBride, Burton.
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Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

FARMERS' CLUBS IN MARYLAND.

BY A COUNTRY PARSON.

Maryland has a large number of Farmers' Clubs. The oldest is the famous Club organized at Sandy Spring, Montgomery county, in 1844. This Club is still active and it has never found it necessary to amend its unique constitution, which had only one paragraph reading: "We adopt for our government no rules other than those which govern gentlemen in good society, with the single exception that it shall be the duty and privilege of each member to criticize freely any arrangements on the farm of a member at whose house the Club is meeting."

The second oldest Club in the state is the Deer Creek Farmers' Club, of Harford county. These Farmers' Clubs usually take a neighborhood name. Thus we have Rich Neck, Junior Gunpowder, Fallston, Forest Hill and Chaptico Farmers' Clubs. They vary in character and work, just as neighborhoods vary. The Deer Creek Club, I am told, is composed of agriculturists rather than farmers, taking that word in its accepted sense as meaning men who make money in the city and spend it in the country. It has considerable influence in the larger public affairs of the state. The Haman oyster planting law was publicly launched upon its eventful career in a meeting of this Club.

One of the most successful Farmers' Clubs in the state is the Rich Neck Club, of Queen Anne's county. Rich Neck is a section of the county of about twelve square miles. It was formerly the center of the peach-growing section. As peaches went out of orchard after orchard, being destroyed by the "yellows," the Rich Neck people were stranded. They had raised no tobacco for fifty years. They then placed their dependence upon corn and wheat, baling and selling their straw in Baltimore. They also raised tomatoes for the canning factories. With the destruction of the peach orchards, and the depletion of soil fertility through this method of farming, land values went down until nobody could explain why this section could ever be called Rich Neck.

The Farmers' Club was then organized about seven years ago. Like most of them, it limited its membership to 15 farmers' households. It meets at the homes of its members and the member entertaining the Club has the privilege of inviting as many guests as he pleases, so that the usual attendance is about 70 persons. The editors of the local papers and the local ministers have a standing invitation to all meetings. By thus frankly recognizing the right of each member who entertains the Club to invite any of his friends or acquaintances, this Club, despite its limited membership, has preserved a fine spirit of democracy which some of these organizations have altogether lost. From April to December the Rich Neck Club meets at 2:30 and has a session after the evening meal. From December to March it meets at 10:30 a. m., and adjourns early in the afternoon so that everybody can reach home before dark.

Speakers of prominence in agricultural science are invited to address these meetings. The formal program has certain set features, the most unique of which is the written report of an investigating committee, which before the meeting visits the member entertaining the Club and "criticizes freely any arrangements on his farm." If his house needs paint, or his colts have the mange; if his fruit trees need pruning or spraying, if his front yard needs a walk or a few flowers; if the sanitary conditions surrounding his house and barns need improvement, he is sure to hear of it. This feature at one time threatened to disrupt the Club, but the thought that no man need ever fear open, honest, sympathetic criticism, especially when he is given every opportunity to defend himself, saved the situation. The practice has proved most helpful.

To be continued.)

CLUB DISCUSSIONS.

Will Hold no July Meeting.—The June meeting of the Ingham County Farmers' Club was held at Pleasant Hill Farm, home of Mr. and Mrs. J. S. Coy. The weather was fine, the attendance good, and everybody had a good time. Following the opening exercises, "The High Cost of Living" was discussed by Rev. Maxwell, who said the present high cost of living was caused by selfishness, greed and pride, and that there would be less of these if there was more teaching of love and righteousness. In discussion others stated the subject as "The Cost of High Living," for which people are themselves largely responsible, while the cheapness of gold and other economic reasons were advanced by still other speakers. J. H. Thayer gave a talk on New Mexico, which was both interesting and instructive, and was so much appreciated by his hearers that he was presented with a bouquet of pink roses by the ladies. The Club will hold no meeting in July. The August meeting will be held at Walnut Grove, with Mrs. Luck Jennings.—Cor. Sec.

Grange.

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

JULY MEETINGS.

State Lecturer's Suggestions for Second Meeting.

Song.
Prayer, "A prayer of the out-of-doors."
Poem relating to grass or grain, read or recited.
Seed improvement by selection of heads. Discussion.
Reading or recitation.
Sweet clover—a new applicant for favor, a talk with samples and pictures.
Song.
Michigan seed law, passed in 1913.
Alfalfa on every farm.
Exhibit of heavy grain heads.
Ceres assists lecturer in this program.

TRI-COUNTY GRANGE RALLY A BIG SUCCESS.

One of the most successful Grange celebrations held in Michigan took place at Charlotte fair grounds, Saturday, June 13, when Barry, Eaton, and Calhoun county Granges and their friends, united in a grand rally.

The weather was ideal, and about 4,000 busy farmers, with their families, took advantage of the holiday, and added to the success of the occasion by their enthusiastic appreciation and applause.

At 11:00 o'clock a fine parade, two miles long, of about 25 gaily and appropriately decorated floats, autos in festive attire, and horseback riders, led by a chief marshal and a real farmer band, formed and marched to the fair grounds.

The band was from Glass Creek, Barry county, and added much to the gaiety of the occasion, with its well-played martial airs. The floats, which

were drawn by four or six-horse teams, displayed originality and artistic thought and preparation. Some represented emigrant wagons equipped with household goods, which were common at the time represented. Others showed the early Jesuit explorers and Indians. Others showed the farming and housekeeping utensils of the early days, while in contrast others showed the machinery and labor-saving devices of the present day. Some were symbolic of the sentiment of the Order and were dedicated to Flora, Pomona, Ceres, and the Horn of Plenty.

Much credit is due the people of Eaton county for this fine demonstration of their loyal and enthusiastic Grange spirit, which makes such an undertaking a success. The business men of Charlotte are also due credit for the assistance they gave to the Granges in preparing the parade.

After the picnic dinner came the program, the educational feature of the day, which was no less a success than the big parade of the morning.

Mr. P. M. Vester, Master of Barry County Pomona, in a pleasing manner presided. He first introduced N. P. Hull, who in his usual tactful and humorous way, opened the program by congratulating those having the affair in charge, upon the excellence of the parade and the general arrangements.

In response came State Master Ketcham, who is always enthusiastic and entertaining. Mr. Ketcham said he was proud of the splendid showing made by the Granges of the three counties, and was glad to see so many present to enjoy the occasion, which is a demonstration of what can be done when the right spirit permeates the membership.

Several excellent numbers were especially well rendered by the Stanley Orchestra, of Calhoun county.

Mrs. Vivian Moore and Mr. John Woodworth, both of Battle Creek, delighted the audience, each with two entertaining readings. Mr. Woodworth is nearly eighty years old and for 41 years has been a Granger. He is a general favorite in all Grange festivities, and is always willing to respond when called upon. His appropriate selection was "The Old Dinner Bell Down on the Farm."

The great event of the day was the appearance on the program of Hon. Charles M. Gardner, of Westfield, Massachusetts, High Priest of the Degree of Demeter, whose influence is reaching far among our Grange people through the columns of his paper, the National Grange Monthly, of which he is managing editor. His subject was "The Grange as an Investment."

Mr. Gardner is a natural orator, with the grace and polish of the scholar and the true gentleman. He complimented the committee whose splendid work had made the occasion so great a success, and expressed a gratification in the enthusiastic and progressive spirit displayed in the whole affair. His thoughts and ideals were high, and with emphasis he pointed out the power which the people of the Grange might wield for the good of themselves and the improvement of their surroundings.

Every farmer present could go home with an inspiration to be a better man and a determination to do more for his family, his home, and his country, after having heard the inspiring words of so strong a champion of his calling.—Mrs. Laura A. Minges.

Hadley Grange keeps a bulletin of black cambric neatly tacked across the rear wall and on this pins letters regarding contracts and samples of twine, paint, etc.

Ann Arbor Grange devoted most of one meeting to the Torrens System of Land Transfers, with Prof. John R. Rood, author of the series of articles upon this subject which appeared in the Michigan Farmer recently.

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Markets.

GRAINS AND SEEDS.

June 30, 1914.

Wheat.—The market is on the decline. Quotations have suffered a 3½c cut since a week ago. The enormous crop being produced in this country is the single bearish factor that is overcoming a long list of bullish excuses for higher values. In the southern district of the winter wheat belt, threshing continues under favorable conditions, and the grain is being marketed immediately. The appearance of this wheat on the market and the uninterrupted development of the plant in the northern states and Canada makes it impossible for the bulls to hold prices steady. On the other hand, the visible supply for this country decreased about four million bushels. Russia reports damage in the southwestern provinces from hot winds and there is a large decrease in the amount of wheat going abroad, while foreign buyers seem anxious for the grain. A year ago No. 2 red wheat was quoted at \$1.02¼ per bushel. Quotations for the past week are:

	No. 2	No. 1	
	Red.	White.	Sept.
Wednesday	88½	88	81¼
Thursday	87½	87	81¼
Friday	86½	86	80¼
Saturday	86¾	86¼	80½
Monday	86¾	86¼	80
Tuesday	86¼	85¾	79½

Chicago, (June 30).—No. 2 red wheat 80¾@82c per bushel; July 77¾c; Sept., 77¾c.

Corn.—Because of the generally favorable weather conditions and the bearish trend of the wheat market, corn values have declined. The new crop now appears to be making up for the lateness of planting, thus improving the outlook for a normal yield. Europe is buying American corn and Argentine has ceased to be the bearish factor it was in the trade here. A year ago No. 3 corn was quoted at 61¼c per bushel. Quotations are as follows:

	No. 2	No. 2	
	Mixed.	Yellow.	
Wednesday	72½	74	
Thursday	72	73½	
Friday	71	72½	
Saturday	71½	73	
Monday	71½	73	
Tuesday	71¼	72¾	

Chicago, (June 30).—No. 2 corn 69@71¼c; July 68c; Sept., 66¼c.

Oats.—Cool weather has benefited the oat crop, which, with the lower values for wheat and corn has compelled traders to reduce quotations. In a number of places, however, the crop is so short that ideal conditions cannot overcome the damage done by lack of moisture. A year ago standard oats were selling at 44¼c per bushel. Quotations for the past week are:

	Standard.	No. 3	
		White.	
Wednesday	42	41½	
Thursday	42	41½	
Friday	41	40½	
Saturday	41	40½	
Monday	40½	40	
Tuesday	39½	39	

Chicago, (June 30).—No. 3 white 37¾@38¼c; July 37¾c; Sept., 36c.

Rye.—This cereal is steady. No. 2 is quoted at 66c per bushel.

Beans.—Market is easy; prices are 5c lower. Quotations: Immediate and prompt shipment at \$1.85; July \$1.90 per bu. Chicago reports quiet trade. Pea beans, hand-picked, choice are lower at \$2.15@2.20; common \$1.95 @2; red kidneys, choice \$3.20@3.25.

Cloverseed.—Prime spot \$8.10; October and December \$8.50; prime alike \$10.

Alfalfa Seed.—Prime spot \$8.35 per bushel.

Timothy Seed.—Prime spot \$2.60 per bushel.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs. as follows. Best patent \$5.30; second \$4.90; straight \$4.50; spring patent \$5.10; rye flour \$4.40 per bbl.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$25; standard middlings \$28; fine middlings \$30; coarse middlings \$31; cracked corn \$32; corn and oat chop \$28.50 per ton.

Hay.—Prices down 50c. Carlots on track at Detroit are: No. 1 timothy \$16.50@17; standard \$15.50@16; No. 2, \$15@15.50; light mixed \$15.50@16; No. 1 mixed \$13@13.50; No. 1 clover \$13@13.50.

New York.—Market easy and steady. No. 1 timothy \$21@21.50; No. 3 to No. 2, \$16.50@20.

Chicago.—Market is steady. Choice timothy quoted at \$17@17.50 per ton;

No. 1, \$14.50@15.50; No. 2, \$12.50 @14.

Straw.—Steady. Rye \$8@8.50; oat straw \$7@7.50; wheat straw \$7@7.50 per ton.

DAIRY AND POULTRY PRODUCTS.

Butter.—Market steady, with prices unchanged. Extra creamery 26½c per lb; firsts 25½c; dairy 18c; packing stock 16c.

Chicago.—Market is firm, with last week's prices well maintained. Extra creamery 26½c; extra firsts 25@25½c; firsts 22½@24c; seconds 20@21½c; packing stock 17½@18c.

Elgin.—Market is firm at 26½c per lb., which is 1c lower than last week. **New York.**—The market is steady. Prices are slightly lower. Creamery extras 27¼@27½c; firsts 24½@26½c; seconds 22@24c; packing stock 18½c.

Eggs.—Market is active, with fresh stock selling at 18½c per dozen.

Chicago.—Market is steady with prices unchanged, except for poor lots which are weak. Miscellaneous lots, cases included 16@18c per dozen; ordinary firsts 16¼@17c; firsts 17¼@18¼c.

New York.—Market steady. Prices unchanged. Fresh gathered extras 23@25c; firsts 22@22½c per dozen.

Poultry.—Market is firm with little change in prices. Broilers are slightly lower. Live—Broilers 25@27c per lb; hens 14@16c.

Chicago.—The market is firm, the demand and the supply both being good. Fowls are higher. Quotations on live are: Fowls 15½c; spring chickens, 1½@2 lbs. weight 24@25c; spring ducks, 3@5 lbs., 16@18c.

FRUITS AND VEGETABLES.

Strawberries.—Market steady with the demand good. Michigan 16-qt. cases quoted at \$1@1.25. At Chicago the market for good quality fruit holds firm. Prices for Michigan berries range from \$1.25@1.75, depending on quality.

Other Fruits.—Gooseberries \$1@1.10 per 16-qt. case; currants \$2@3 per case; cherries, sour \$1@1.10 per 16-qt. case; sweet \$1.25. **Chicago.**—Michigan cherries, 16 qts., sour \$1@1.15; black, sweet \$1@2; gooseberries 16 qts., Michigan 75c; currants, 16 qts., Michigan \$1.25@1.50.

GRAND RAPIDS.

Heavy rains during the past week were bad for fruit and produce. The strawberry season in this section is over, the few cases in sight Monday selling at \$2.25 each. Cherries have rotted badly, with prospects that the later sorts will be scarce and high. First home-grown new potatoes are in and are bringing around \$2 per bu. Home raspberries are about due and prospects point to a large crop. The egg market continues at 18@18½c; dairy butter 20c; chickens, live weight, are worth 12c; broilers 20c; wheat is off to 85c; with other grains steady.

WOOL.

In spite of the fact that this is the season of heavy primary receipts, wool continues to advance with the outlook very promising for sellers. Last week the sales in Boston were two and a half million pounds greater than for the week before, and nearly seven times as large as for the corresponding period of 1913. In the fleece states farmers are being paid from 22@25c per pound and it is probable that those who hold their wool will secure better prices than are now offered. The foreign market is keeping pace with the advance on this side. The prices for Michigan wool at Boston range from 23@27c per pound.

DETROIT EASTERN MARKET.

The variety of offerings is small. Some cherries were selling around 12c per quart. Lettuce is plentiful, with common kind down to 10@15c per basket, and head at 35@50c; eggs 25c per dozen; loose hay \$16@18 per ton.

THE LIVE STOCK MARKETS.

Buffalo.

June 29, 1914.

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

Receipts of stock here today as follows: Cattle 140 cars; hogs 80 d. d.; sheep and lambs 15 d. d.; calves 1300 head.

With 140 cars of cattle on our market here today, the dry-fed and strictly fat cattle of all descriptions, quality considered, sold strong with last week, and in some instances 10c per cwt. higher. The grass and half-fat cattle sold dull and draggy from start to finish. The grassy and slippery

cattle sold very irregularly and from barely steady with last week to 15@20c lower. We would advise our shippers to be very careful about shipping grass cattle, especially the bony and half-fat kind, as we think they are bound to sell considerably lower in the near future. At the close of the market about everything was sold, but as the day advanced the prices on the common cattle were even lower.

Our receipts of hogs here today were lighter than we have had for some Mondays past, and with strong demand from packers, trade opened active and prices generally 20@25c higher than Saturday. All weights of good quality sold at 9c generally. Some ordinary heavy weight hogs quotable as low as \$8.60@8.75; roughs \$7.25@7.50; stags \$6@7. Late market was rather dull and with prices comparatively high, looks very much like a slightly lower market the balance of the week.

The market was active today on lambs and sheep. Prices steady with the close of last week. Choice handy lambs selling mostly at \$9.25@9.50. We look for steady prices last of week, with moderate receipts.

We quote: Spring lambs \$9.25@9.50; cull to fair \$6.50@9.25; yearlings \$8@8.50; bucks \$3.50@4; handy ewes \$5.50@5.75; heavy ewes \$4.25@4.35; wethers \$6.25@6.75; cull sheep \$3@4; veals, choice to extra, \$10.75@11; fair to good \$8.50@10.50; heavy calves \$5.50@7.

Chicago.

June 29, 1914.

Cattle. Hogs. Sheep.
Receipts today..16,000 36,000 24,000
Same day 1913..18,611 39,405 22,695
Last week37,045 127,151 76,724
Same wk 1913..39,960 142,407 62,923

Another meager Monday supply of cattle failed to start up any early enthusiastic buying, and at a rather late hour little was done except in fat butcher cattle, which looked somewhat higher. Commission firms were calling steers strong to a dime higher on a guess. Hogs were up 5c, with sales at \$8@8.50 and strong-weight prime pigs selling up to \$8.25. Hogs marketed last week averaged 238 lbs. There was a good run of lambs, including quite a showing of springs from Idaho and Oregon sheep. City butchers bought a few cars of prime native spring lambs early at \$9.50, but packers held back, bidding only \$9 for choice lots, and trade was late in opening in earnest.

Cattle sold 10@15c better last week, with a better demand and very moderate offerings, recent liberal rains over most of the country having put a sudden stop to the previous marketing of stock prematurely from dry districts. The offerings were very small of the stocker and feeder classes of cattle, and there was also a limited supply of about everything included in the beef cattle class. Beef steers sold largely at \$8.15@9.15, the best class of heavy beefs going at \$9.15@9.40 and a common to fair class of grassy, light steers at \$7.40@8.40. A medium class of steers brought \$8.45@8.70, and a good class sold at \$8.75@9.10, with desirable little yearlings going at \$8.65@9.30 for good to fancy, and sales all the way down to \$7.75@8.25 for ordinary to fair yearling steers and heifers mixed. Butcher cows and heifers were free sellers at \$5@8.90, but weakness prevailed in grassy lots, which were lower, while prime heifers ruled higher. Cutters sold at \$4.40@5, canners at \$3.35@4.35 and bulls at \$5@7.75. Stockers and feeders had a moderate demand, with sales at \$5.90@8.15. Much the best demand was for stock steer calves, the better class going at \$7.95@8.15. There was a limited trade in stock cows and heifers at \$5.25@7.15, these cattle, as well as stock and feeder steers, selling far below prices current several weeks ago. Demand for stockers comes mainly from Illinois, Indiana and Michigan. Calves sold during the week at an extreme range of \$5@10.25 per 100 lbs. for coarse heavy to prime light vealers. Milkers and springers had to possess quality to attract the attention of dairymen from different states, sales being on the basis of \$60@95 per head, but hardly any were offered prime enough to sell around the top figures. Other cows went to killers at low prices.

Hogs sold last week at the highest prices recorded in many weeks, with a good demand and customary reactions from the top figures. On different days considerable numbers of grassy hogs showed up, and buyers discriminated against these, insisting upon liberal discounts from prices paid readily for choice consignments. Medium and heavy shipping hogs topped the market, with prime light hogs going slightly below the highest figures. Hot weather on some days resulted in a good many dead hogs being taken from arriving trains. Receipts averaged in weight 237

lbs. For the last week of June last year the average was 242 lbs. Consumption of fresh pork is good for the summer period, when it is usual to see a falling off, and cash sales of cured hog meats are good, considering the high prices. There is a marked hog shortage in the country, but a good pig crop is reported in most sections. Top for hogs last week was \$8.50, closing prices ruling at \$7.90@8.45 for poor to prime, with both light and heavy lots at the top, while pigs brought \$6.50@8.15. Prices were about the same as a week earlier.

While it was not possible last week to maintain full recent prices for choice spring lambs, fed lambs and sheep, yet prices looked high when compared with most former years, and reactions took place after declines. Wethers arrived from Oregon and fair numbers of ewes and fed lambs showed up, but most of the receipts consisted of spring lambs. The first shipment of Idaho springs arrived, comprising 1,539 head, averaging 65 lbs., and they brought \$9.35. The first shipment a year ago brought \$7.25. After the best spring lambs had sold at \$9.35 there was a sudden boom that lifted them to \$9.65, with sales all the way down to \$6.50@8.75 for the commoner lots. Fed lambs sold at the close at \$6@8.25, wethers at \$5.75@6.25, ewes at \$2.50@5.10 and bucks at \$3@4. Oregon wethers brought \$6.15.

Horses were marketed so moderately last week that sellers were able as a rule to dispose of them without making further reductions in prices. Wagoners had a fair outlet at \$210@250 for desirable animals, and drafters sold at \$240@275, with a prime class scarce and largely nominal at \$280@300 and over. Horses offered sold largely below \$200, with a cheap class of drivers salable at \$75@125. The general demand was moderate, and shippers were the best customers.

CROP AND MARKET NOTES.

(Continued from page 17).

fine condition. A great many potatoes are grown here, but no corn grown. Small fruits are abundant. Special attention is given to spraying orchards. The strawberry season is over, and the crop was a very successful one. Butter 30@35c; eggs 30c; hens live 16@18c; dressed pork 10@14c; hay \$12@18 per ton.

Kansas.

Finney Co., June 20.—There is a large acreage of wheat nearly ready to harvest. The record for wheat will be broken in this county this year; there has been plenty of rain and the spring crops are looking fine. A great deal of maize being raised this year. Alfalfa is a fine crop; the prospect for fruit is good; our wild grass (buffalo grass) is extra good. Eggs 17c; butter and cream 20c per lb; hens 11c; squabs 10c each; hogs 7½c.

Dickinson Co., June 22.—Harvest is in full blast. Wheat the heaviest in years; recent heavy rains made some of the wheat go down in low fields. Oats a heavy crop and nearly all cut; corn in fine condition; some damage done to alfalfa by the army of worms; early fruit of good quality. Most of the grain was cut with binders on account of being so tall. Stacking will go on right away; no threshing done yet. Potatoes ready to use.

Missouri.

Barton Co., June 20.—Wheat all in the shock; some threshed, yielding 20 to 25 bushels; worth 70c; oats are partly cut. Dry weather has hurt oats and tame hay crops; army worms did some damage to tame hay and corn; very few chinch bugs here this year. Corn in good condition and will make a good yield if we get plenty of rain from now on. Potatoes are only a fair crop. Gardeners are also needing rain badly.

Ohio.

Madison Co., June 20.—The harvest is now on. Wheat fine crop; oats very poor; rye a fair crop; potatoes will be almost a failure on account of drouth; the price has advanced to \$1.50 per bu. Pastures are very poor, also meadows. We are having a few light showers but will not benefit much, except corn, which is growing nicely. Wheat 77c; oats 38c; rye 60c; corn 65c.

Crawford Co., June 23.—All growing crops suffered by the dry spell which we had up to June 22, then we had a fine rain; some corn in low fields had been damaged by light frost. The usual acreage of corn had been planted; corn, oats and potatoes are backward; some potatoes to plant yet; not much spraying done after blossoming; wool has all gone to market; the first clipped wool was sold for 18@20c; prices increased and the late clipped wool brought from 23@25c; hay making has begun and the crop is not as promising as it had been expected. Much hay is going to market. Mixed hay \$11; timothy \$13; wheat 85c; oats 37c; corn 68c; hogs \$7.60; veal calves 8c; butter 17@20c.

THIS IS THE LAST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

July 2, 1914.

Cattle.

Receipts 1310. Market steady. Best dry-fed steers \$8.50@9; best handy-weight butcher steers \$8@8.50; mixed steers and heifers \$7.50@8; handy light butchers \$6.75@7.50; light butchers \$6.50@6.75; best cows \$6@6.50; butcher cows \$5.25@5.75; common cows \$4.50@5; canners \$3@4.25; best heavy bulls \$6.75@7; bologna bulls \$6@6.25; stock bulls \$5@5.50; feeders \$6.75@7.75; stockers \$6.25@7; milkers and springers \$4@7.50.

Bishop, B. & H. sold Bresnahan 14 stockers av 550 at \$6.10, 7 do av 525 at \$6.10; to Sullivan P. Co. 1 cow wgh 970 at \$5.75, 1 do wgh 840 at \$5, 5 butchers av 950 at \$5.75, 1 bull wgh 1230 at \$6.50, 3 cows av 1063 at \$5.75, 1 heifer wgh 700 at \$6.75, 1 cow wgh 1070 at \$6, 8 steers av 1060 at \$7.75; to Bresnahan 4 cows av 950 at \$5, 3 do av 860 at \$5; to Parker, W. & Co. 2 do av 960 at \$4.75, 2 bulls av 1055 at \$6.25; to Schumaker 16 steers av 862 at \$7.35; to Sullivan P. Co. 3 cows av 1103 at \$6; to Hammond, S. & Co. 2 do av 1040 at \$6, 1 bull wgh 1430 at \$6.50; to Parker, W. & Co. 3 cows av 1153 at \$6.25, 4 steers av 875 at \$7.50; to Jersey 32 stockers av 509 at \$7; to Frutchey 26 steers av 960 at \$8.12½, 13 stockers av 514 at \$6; to Newton B. Co. 2 cows av 1185 at \$6.20, 12 steers av 985 at \$7.85, 2 bulls av 1215 at \$6.65; to Mason B. Co. 2 heifers av 635 at \$5.50; to Parker, W. & Co. 2 cows av 810 at \$4, 3 heifers av 460 at \$5, 3 do av 707 at \$7; to Mason B. Co. 4 do av 732 at \$7; to Austin 9 stockers av 491 at \$6.10; to Frutchey 25 feeders av 838 at \$7.75; to Bresnahan 14 stockers av 464 at \$6; to Schumaker 12 feeders av 862 at \$7.25; to Parker, W. & Co. 31 steers av 850 at \$7.75, 2 cows av 975 at \$4.50; to Sullivan P. Co. 14 steers av 856 at \$7.75.

Haley & M. sold Smith 4 stockers av 585 at \$6.15, 2 do av 475 at \$6; to Applebaum 2 cows av 1075 at \$5.10; to Breitenbeck 7 steers av 890 at \$7.50, 2 cows av 875 at \$5.40, 3 do av 1070 at \$5.90; to Mason B. Co. 2 bulls av 1315 at \$6.65, 3 steers av 850 at \$7.75; to Newton B. Co. 4 cows av 1015 at \$5.90, 1 do wgh 1060 at \$5.50, 1 steer wgh 830 at \$7; to Rehfuß 7 stockers av 593 at \$6.80; to Rattkowsky 4 cows av 1105 at \$5.75; to Schumaker 2 steers av 875 at \$7.75, 2 do av 930 at \$8.

Spicer & R. sold Findlay 2 stockers av 565 at \$6.50; to Sullivan P. Co. 1 bull wgh 1360 at \$6.35, 4 do av 1115 at \$6.25; to Bresnahan 2 cows av 1100 at \$5.15; to Rehfuß 2 stockers av 690 at \$7; to Kull 1 cow wgh 1020 at \$6.25, 1 steer wgh 620 at \$6.75, 4 do av 867 at \$7.65; to Smith 3 stockers av 343 at \$5.75, 3 do av 483 at \$5.50, 6 do av 480 at \$5.25; to Sullivan P. Co. 3 cows av 1003 at \$6, 8 do av 1047 at \$6; to Watts 12 feeders av 818 at \$7; to Breitenbeck 19 butchers av 750 at \$6.50.

Veal Calves.

Receipts 943. Market steady. Best \$10@10.75; others \$8@9.50.

Spicer & R. sold Thompson Bros. 6 av 145 at \$10.75, 2 av 195 at \$8.50, 6 av 155 at \$11, 12 av 150 at \$10.60; to Parker, W. & Co. 2 av 135 at \$10.25, 2 av 160 at \$9, 20 av 135 at \$10.50; to Rattkowsky 12 av 160 at \$10.50, 11 av 150 at \$9.75; to Goose 7 av 145 at \$8.50; to Kull 14 av 160 at \$10.25; to Shapero 3 av 155 at \$10.50; to Applebaum 8 av 160 at \$7.50; to Goose 27 av 155 at \$10.25.

Sheep and Lambs.

Receipts 1520. Light sheep strong; other grades steady. Best lambs \$9; fair lambs \$7.50@8.50; light to common lambs \$6@7; yearlings \$7.50; fair to good sheep \$4.75@5.50; culls and common \$2.50@3.50; heavy sheep \$4.

Haley & M. sold Newton B. Co. 13 lambs av 60 at \$8, 37 do av 75 at \$8.75; to Thompson Bros. 11 mixed av 67 at \$5.50, 7 sheep av 95 at \$4, 9 lambs av 55 at \$8, 16 do av 63 at \$8.75; to Mich. B. Co. 82 do av 65 at \$8.75, 18 wool lambs av 100 at \$7, 15 sheep av 125 at \$4.

Roe Com. Co. sold Sullivan P. Co. 10 sheep av 116 at \$4; to Mich. B. Co. 30 lambs av 55 at \$8.50, 10 do av 83 at \$8.50, 15 sheep av 150 at \$4.

Hogs.

Receipts 4672. None sold up to noon; prospects strong at Wednesday's prices, or \$8.40@8.45.

Bishop, B. & H. sold Hammond, S. & Co. 2500 av 190 at \$8.45, 250 av 200 at \$8.50.

Roe Com. Co. sold Sullivan P. Co. 350 av 190 at \$8.45.

Spicer & R. sold Parker, W. & Co. 310 av 190 at \$8.45.

Haley & M. sold same 450 av 190 at \$8.45.

Friday's Market.

June 26, 1914.

Cattle.

Receipts this week 973; last week 1436; market steady. Best dry-fed steers \$8.25@8.75; best handy weight butcher steers \$8@8.50; mixed steers and heifers \$7.50@8; handy light butchers \$6.75@7.50; light butchers \$6.50@7.25; best cows \$6@6.50; butcher cows \$5.25@5.75; common cows \$4.50@5; canners \$3@4.25; best heavy bulls \$6.25@7; bologna bulls \$6@6.25; stock bulls \$5@5.50; feeders \$6.75@7.50; stockers \$6.25@7; milkers and springers \$35@70.

Veal Calves.

Receipts this week 1030; last week 1116; market steady. Best \$10@10.50; others \$8@9.50.

Sheep and Lambs.

Receipts this week 1743; last week 1106; market steady. Best lambs \$9@9.50; fair do \$8.75@9; light to common lambs \$6.50@7.50; yearlings \$7.50@8; fair to good sheep \$4.50@5; heavy sheep \$4; culls and common \$3@3.50.

Hogs.

Receipts this week 7192; last week 7926; market 5c higher; pigs \$8.30; others \$8.40.

LIVE STOCK NEWS.

The cattle shortage in the country is indicated by the fact that the combined receipts in the six leading markets for the first five months of the year amounted to only 2,347,000 head, being 265,000 less than for the same period last year. This falling off was partly offset by the importations of Argentine beef, which were equal to 82,750 cattle. Of late especial animation has been seen in the stocker trade whenever any decline in prices took place, for there has been a strong desire among farmers to utilize their luxuriant grass by placing cattle on their pastures, but in many instances intending buyers have failed to make purchases because of the high prices current at a time when prime finished beefs were selling lower than a few weeks ago.

Dairy-bred cows are reaching the Chicago market in large numbers and are proving bad sellers.

Receipts are making a good showing, and there has been a steady gain in weight, late arrivals averaging 237 lbs. For the first week of June last year the average was 244 lbs. Prime light and medium weight shipping hogs are selling at the top prices daily, with prime heavy shipping going within five to 10c of the top, and coarse heavy packing hogs lowest of all, as usual. Consumption of provisions is curtailed by their dearthness, but the Chicago holdings are decreasing in volume, having aggregated on the first day of June 107,997,276 lbs., comparing with 115,190,895 lbs. a month ago, and 108,783,521 lbs. a year ago. Late in the week prime heavy shipping hogs sold highest of all, with the top \$8.35, or 5c above the best light lots. Coarse heavy packing hogs brought \$7.90@8, and pigs sold at \$6.75@7.85. A week earlier hogs brought \$7.75@8.10.

Horses had to be very desirable to sell well last week, and even then, there was little call for farm workers, quite good geldings selling at \$125. Chunks sold fairly on a basis of \$185@210 for the lighter weights, with better and heavier ones bringing \$225@250. Few of the prime heavy drafters showed up, these being quoted at \$275@300. The best sale of the week was that of a pair of fancy heavy chestnuts at \$650.

Late reports from Montana are that there is a scarcity of both cattle and sheep on the ranges. Jas. V. Merriam, who returned to Chicago recently from a visit to Montana, said: "I do not believe there will be a third as many aged sheep marketed from Montana this year as last. There are only a few of the big sheepmen left, nearly all of them having been crowded out by settlers. The lamb crop is excellent, figured on a percentage basis, but away below former years because of ewe shortage. Grass is fine, and there is a world of feed, heavy rains having fallen throughout that region, following a big snow storm several weeks ago."

Packing firms have been bringing in liberal supplies of spring lambs consigned to them direct from Louisville, and this movement takes in quite a substantial share of the Chicago receipts, but fat springs offered on the market were bought readily at high prices. Weighty live muttons fared badly as usual in hot weather, and inferior grassy stock sold unsatisfactorily. Late reports are that the southern spring lamb crop is a very short one. The close of the week saw spring lambs going at \$7@9.75 per 100 lbs., while clipped flocks sold as follows: Lambs \$6@8.75; wethers \$5.50@6.35; ewes \$3.50@5.50, bucks \$3.75@4.25; but few ewes went over \$5.25. Springs advanced during the week 15¢@25¢ and most clipped lambs 35¢@50¢.

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Farm Commerce.

Does Big Farming Hurt the Little Farmer?

THE fields, orchards, huge vegetable sheds and cold storage plant of the big fruit and truck farm presented a wonderful panorama. Motor trucks and teams were hauling huge loads of vegetables to the shipping station and storage house. Long, open sheds were filled with crates, boxes and barrels, awaiting the harvest of the truck and fruit crops. More than a hundred Italian laborers were busy in the fields and sheds gathering, grading and packing vegetables into boxes, crates and bags. The long straight rows of onions, lettuce and celery afforded a striking contrast to the little farms across the road. It was a big farm incorporated and run for profit.

Many of the Little Farms were ill-kept.

The most of the little farms were divided into small fields, the fence rows were grown up to weeds, briars and bushes, apparently the owners were making a meagre living. One of these farms supported six poor dairy cows, an old team, three hogs and a flock of fowls. The old orchard had been allowed to grow up to weeds and brush, the fences were run down, the buildings dilapidated; it was but a remnant of a once prosperous farm. It was still occupied by the old farmer and his faithful wife; the children had grown up and gone to the city and engaged in other lines of business. The old farm had furnished the money necessary to give the children good educations; but after they were left alone the old man and his wife lost interest in farming except to keep the old home until nature gently whispers that their life's work is done.

An Exception.

On the farthest corner, directly opposite the storage plant is a well-kept little farm. It is owned by an industrious young man who gave up a good position, on account of failing health, and moved into the country. On a neat bulletin board the writer was attracted by the announcement that among the things for sale were muskmelons, apples, grapes, cottage cheese, Rhode Island Red cockerels, and pigs.

One's first impression of the little farm was that it could not compete successfully with the big farm across the road. A view of the small fields, the wide variety of products and the small fruit plantation was perplexing. From the road one could see five acres of apples, two acres of pears and plums, two acres of grapes, one acre of currants, and raspberries and two acres of strawberries. On the opposite side of the buildings several acres were utilized for truck crops and general farming. Back of the fruit and truck area was from 20 to 25 acres of newly cleared stump land which served for meadow and pasture. The entire farm consisted of less than 40 acres. Outside of the fruit area it supported five good cows, four brood sows, a work team and about 200 fowls. As I drove up to the side of the house I was met by an alert, keen-eyed woman. In addition to her household duties she found time to look after poultry and attend to the selling of the small things produced on the farm.

Not Competitors at All.

As a refined, business woman and helper, you could not help liking Mrs. Smith. She is a courteous, patient, understanding woman, with a pleasant smile, a quick sense of the customer's personality, and the most delightful sale-making urbanity. Before I had really determined what I wanted she had sold me a peck of delicious apples, a basket of grapes and several muskmelons.

"How do you find the business of selling direct to the local consumers?" I asked Mrs. Smith as she handed me my change.

"We make a good living," she replied. "We have not become wealthy."

"I have been visiting your competitor across the road," I said. "It is one of the most wonderful farms I have ever visited."

"He is no competitor," said Mrs. Smith. "He is one of our regular customers. He depends upon our farm for nearly all of his fruit, vegetables, cream, eggs and dressed fowls."

I began to understand. It had struck me as curious how this little farm, growing fruit and vegetables, could be made to pay so close to the big farm, apparently duplicating so many of its products. On its face it seemed absurd. The big farm could produce crops more cheaply. It could reach the big markets with carload lots of produce. It could make more efficient use of employed labor. It appeared to have every advantage. One would imagine that the little farms would disappear, but these little farms do not disappear. They soon adapt themselves to the changed environment. The more I thought it over, the more I became convinced that the little farm has many advantages.

The little farm takes care of the trade that is too small to be supplied by the big farm. It supplies a trade which the big farm would not be interested in supplying. It is the bushel, peck, dozen and pound sales that make up the business of these little farms. The small cities and villages depend largely upon the products of these little farms. Thousands of these little farms are shipping produce direct to hotels, groceries and private customers in the large cities.

Big Farms Supply General Markets.

In one sense Mrs. Smith was right when she said that the big farm across the road was not a competitor. In another sense she was wrong. The big, commercialized farm is depended upon to supply the general demands of the large city markets, and in a measure it controls the prices of the various fruit and vegetable products. The big farm, though it does not absolutely destroy the little farm, does limit its possibilities. It restricts its range. It lessens its territory. It increases its operating expenses by cutting down the cost of production through the use of expensive labor-saving machines. It raises wages a little by offering employment to the men who work on the little farms. Charles Smith must have spraying machinery, buy a potato digger, and he must pay his hired hand higher wages than he did a few years ago. On the other hand, the big farm cannot successfully cater to the home markets and bother with the private family, hotel and local grocery trade.

Not Impossible to Retain Help.

William, who is 20 years of age, works nine or ten hours on the farm and helps with the chores. He has practically no free time to himself. He helps with the chores Sunday morning but has every other Sunday afternoon and evening off. The Italian hands across the road work only ten hours and have every evening and Sunday off every week.

Nevertheless, William stays with the Smith family for a wide variety of reasons. In the first place he feels at home, he has good board and a clean room to sleep in, he earns \$25 a month, which is as much as he would have left after paying his board and working on the big farm. In the second place, though the hours are

long, the work is pleasant, and there are long evenings when he can read and study. So long as he does his duty he is his own boss.

The man with knowledge, capital and stick-to-it-iveness can develop a small farm that will pay good profits. Private families, restaurants, hotels, groceries and fruit dealers in medium-sized cities and villages are looking about for choice products and there is an increasing demand for highly specialized products in which prices are themselves an attraction. We are beginning to develop an enormous demand for luxuries, for something different, not only of fruits and vegetables, but of poultry products, meats and other things produced on the farm; and it demands that these products be served luxuriously. There is growing up right in the vicinity of these big farms a heavy demand for choice products that will appeal to a very select trade. And some of these little farm owners are beginning to study how they can meet this demand and reach the trade in the most direct way.

The Products Are Select.

It is the quality and selectiveness of their products that permits so many little farms to prosper in the vicinities of the big commercialized farms. They survive because their owners adapt their products to changing conditions. The skillful little farm owner will advance through specializing in quality products; others will simply exist. The big farm is not likely to destroy the profits of the little farm that is rightly managed. It will, however, reduce many of the owners of little farms to the level of an unskilled laborer who prefers to work 12 or 14 hours a day as his own boss, rather than 10 hours a day under an exacting foreman.

A Desirable Plan but a Difficult One to Work.

Agricultural experts tell us that co-operation is the salvation of the little farmer, and point out how western fruit and apple growers, and such highly specialized sections as Monmouth, New Jersey, Aroostook, Maine, and Chautauqua, New York, have succeeded in producing uniform products and working out efficient systems of co-operative marketing. These men, however, have not explained how the little farmers that produce some milk, some potatoes, some apples, some wheat, some meat and some hay can be organized under an efficient system of co-operative marketing. It is far easier to store apples, potatoes and wheat, or to look after trainload shipments of fruit and vegetables than it is to provide storage houses and

systems of gathering, grading, packing and marketing so many varied products.

After a careful study and investigation of the problem of fitting co-operation to these little farms, I am convinced that it must be accomplished through little local associations, with a bigger, stronger, centralized exchange in a large city on the market to sell the produce shipped in. In this way the central exchange would serve as a clearing house for that district and each little association would be put on an equal footing with the big commercialized farms. The little farms would then be able to obtain recognition in the larger markets of the country and while the owners of the little farms would not be lifted to the cheerful heights of prosperity, they would be in a position to divert their shipments of produce to other markets, instead of dumping them on an already overloaded one.

How the Commission Houses Do It.

For example, in one large city the commission houses have formed a sort of a dealers' exchange. This year cauliflower was a drug on this particular market, but these firms bought everything in sight at extremely low prices, reloaded it into cars and shipped it to New York, Philadelphia and Boston, where they obtained high prices. One of the commission firms operating through this exchange cleaned up more than \$25,000 in two weeks' time. If the producers in proximity to this city market had formed little associations and a big central exchange on this city market they could have saved this \$25,000, and held up the prices on their home market. This is but one example where an organization would greatly benefit the little farmers who ship and haul their produce to a large city market.

Such an organization having little local associations working in harmony with a bigger, central exchange would be a big project, far bigger than citrus leagues and apple unions, but it is one of the things we have to solve before we can better conditions of marketing. It is going to take time to fit co-operation to little farms that produce a wide variety of products, but we are at the beginning of an industrial revolution that will overcome every obstacle. Until we have a system of co-operative marketing adapted to present conditions, the little farm must live on the crumbs that fall from the table of the big commercialized farm, or produce products of such high quality that the big farm cannot compete with them in the quality market. W. MILTON KELLY.

The Sherman Anti-Trust Act & Co-operative Associations.

ONE of the most promising movements at present in the agricultural world, according to a recognized student of our marketing systems, is the effort to market farm products in a co-operative way. The objects of such organizations include the standardizing of grades and containers, proper inspection, the combining of shipments into full carloads to save freight charges, and the establishing of a distributing and marketing system. This movement in no way contemplates any "restraint of trade," but on the other hand seeks to do away with a form of restraint of trade that grows out of the present expensive and wasteful plan of marketing through numerous speculators, brokers and other intermediary agents. Many of this class add practically nothing to the value of the products, but take a heavy toll from the ultimate consumer. The consumer feels that he pays too much and the farmer knows that his share of the consumer's dollar is too small. High retail prices retard consumption.

Low wholesale prices discourage production.

With both classes dissatisfied, we have a most distressing form of "restraint of trade," which we are too slow to recognize. The commercial world seems to take the position that farm crops were produced to be sold and manipulated for speculation, rather than to be used. Legislation is constantly being asked for, that is based upon this false conception, viz.: that market manipulation is of greater national importance than production and consumption.

The present discussion in Congress, over the Sherman anti-trust act, has developed the idea that this generally very wise law stands directly in the way of the farmers' co-operative movement, unless it is properly amended, or more reasonably interpreted.

Farmers do Not Want Favoritism.

Some national and state legislators have tried to exempt farm and labor organizations from the application of anti-trust legislation. Not only would such an exemption be both unfair and, we believe, unconstitutional, but the farmers do not ask for or desire any show of favoritism. All they ask is a square deal. If their co-operative marketing associations are, in prac-

tice, contrary to public policy and are, in fact, operated in restraint of any legitimate trade, then these co-operative associations should be put out of business.

In the present Congress an amendment (H. R. 15657, Sec. 7) to the Sherman anti-trust law is being urged, which proposes to exempt from the provisions of the law:

"fraternal, labor, consumers, agricultural or horticultural organizations, orders or associations instituted for the purposes of mutual help, and not having capital stock or conducted for profit," etc

As previously stated, there are many reasons why no exceptions should be made and certain classes be thus favored.

Co-operative Organizations Need Capital.

But this proposed amendment, as worded, would only exempt farmers' organizations "not having capital stock." Most of our present day associations are non-profit in their nature, but most marketing organizations require office equipment, warehouses and more or less other real and personal property. Without any capital, an association would be forced to supply their needs by renting and borrowing on the personal responsibility of the officers or members. This is not desirable.

It can be shown that a co-operative association encourages the production of better crops. It grades and packs these crops more honestly, eliminates waste in handling and shipping, distributes the products more evenly and markets them more directly. The result is that the consumer gets a better product for the same, or a lower price, while the farmer gets more for his labor. Then where is there any "restraint of trade" and who has any real right to complain of such an organization.

A Community Benefit.

To illustrate this point, consider the California Fruit Growers' Exchange. This is the strongest farmers' marketing organization in this country. This year it is handling oranges and lemons to the amount of about \$25,000,000, and by its very efficient methods it is furnishing this nation with citrus fruits cheaper than ever before and for much less than when the growers tried to market their fruit individually. Both the growers and eaters of the fruit have been the gainers. A strict interpretation of the Sherman anti-trust law might put that and other similarly formed marketing associations out of business, to the injury of the consumers and the financial ruin of the growers.

The remedy seems to lie in modifying the Sherman law so as to permit co-operation in all lines of business, where such co-operation is conducted for the public welfare. To pass upon and decide whether any proposed business plan or organization is legal or illegal, it might be necessary to establish an interstate trade commission, as recommended by President Wilson.

In a recent address, President Van Hise, of the University of Wisconsin, approved this plan and stated that among the benefits to be thus secured would be:

1. The efficiency which goes with industrial magnitude will be secureable, and the resultant profits may be fairly distributed between the producer and consumer.

2. The farmers' co-operative movements will become lawful.

3. Labor organizations will be free to co-operate in all legitimate ways.

To leave the Sherman anti-trust law as it is will be to put an end to co-operative progress and cause more financial loss than it can ever hope to save by juggling with monopolistic corporations.

Knowledge of supply and demand is the best preparation for marketing.

PRICE OF STORAGE BUTTER.

After the severe experience which commission men had with storage butter last winter, I anticipated that the price of storage butter this season would be much lower than it has been for years. Then, too, the flurry about the importation of foreign butter affected the market and I anticipated also that this would cut some figure in the price of storage butter this season. As a matter of fact, I expressed an opinion that much butter would go into storage this season at around 20 to 22 cents, but it seems that I knew nothing about it. The bulk of the butter this year is going into storage at around 26 and 27 cents.

These market problems are problems that the wisest do not solve. I talked with a number of commission men who thought practically as I did, that butter would go into storage much cheaper this year than it had for years, and many of the most conservative commission men think now that butter is going in too high. Yet they are compelled to pay the price, that is, they think they are compelled to pay the price. Every one of them is afraid that the other fellow is going to get all of the choicest grades of butter and it is the choicest grades that they want for storage.

It is found from experience that there is no use in putting low grade butter into storage, it doesn't keep so well and when it comes out it doesn't sell well. If you put extras in storage it comes out next winter in good condition and there is a market for it. If you put seconds and low grade butter into storage, when it comes out it has to compete with seconds then, and it is not a simple matter to make money out of storing this grade of butter, so this grade of butter in the storage season is simply shoved aside, as it were, and consumed at the time while the extras and gilt-edge butter goes into storage.

Now each commission man is afraid that if he doesn't pay the price the other fellow is going to get the pick of the butter, and he is going to be in shape next winter to make something off from it, so he is compelled to bid up just as high as he dare go in order to get his share of butter that will grade extra, to put into cold storage. Well, this is a mighty good thing for the dairyman. If it wasn't for the competition in buying storage butter, the dairyman would not receive anywhere near as much for his product.

COLON C. LILLIE.

Crop and Market Notes.

Michigan.

Ottawa Co., June 17.—The usual acreage of corn has been planted, but it is very small on account of late planting. Potato planting is now finished. As meadows are principally timothy, haying will be a little late. Fruit prospects are fair where plenty of spraying has been done. Wheat is maturing fast, and will soon be ready to cut. Wool 22c; eggs 17c; butter 25c; wheat 88c; potatoes 75c.

Shiawassee Co., June 16.—The usual amount of corn was planted, and is looking good. Oats are doing well, but need rain badly. Wheat and rye will be a fair crop. Old meadows are poor, but the new meadows are good, and haying will be early this year. There are many beans to sow yet, as farmers are waiting for rain. There was a good crop of strawberries this year, which brought \$1.75 per bushel. Beans \$1.85; wheat 90c; oats 36c; butter 20c; eggs 18c; hay \$11. Quite a number of barns are being built, and are being rushed to be ready before haying.

Kalkaska Co., June 18.—The recent rains and warm weather have brought crops forward rapidly. Ninety per cent potatoes planted, and early potatoes ready to cultivate. Beans are up nicely. Cutworms have injured the corn to some extent, making replanting necessary. Cultivating is now in order. Wheat and rye are about normal; clover is commencing to bloom, but will be rather short on account of late spring. Alfalfa is ready to cut. Oats are looking good. Pastures have been good. Worms were very bad on fruit trees, in some cases denuding

them of leaves, and no doubt damaging the fruit. Old potatoes are all sold, bringing the grower on an average of 50c; butter-fat 25c; eggs 15c; spring pigs are scarce.

Lapeer Co., June 21.—The ground is very dry, and everything needs a good rain, especially oats, of which there is an unusually large acreage. There is the usual acreage of corn, but a large acreage of potatoes. Quite a heavy frost on June 19 damaged the beans, potatoes, corn and clover. The hay crop averages light. Pastures are injured by the drouth. There are no peaches, and few plums and cherries, and a short crop of apples, as they are dropping off badly. Very little, if any, late spraying was done. Potatoes 55c; eggs 18c; butter 18c per lb; wool 20c.

Livingston Co., June 17.—On account of the extremely hot, dry weather, the hay will be very short. Wheat is looking the best in years. A larger acreage of corn than usual has been planted, owing to the large number of silos that are being erected, and the stand of corn is exceptionally uniform. New seeding looks good, but is in need of rain. Beans are now being planted, with the usual acreage.

New Jersey.

Morris Co., June 17.—There was about the usual amount of oats and corn planted, and both crops are doing fine. Winter wheat is poor; winter rye good. Prospects are good for peaches and plums, but apples will be a light crop. Very little spraying was done after blossoming. Pigs and calves are scarce; pigs six weeks old bring \$8 a pair; cows fresh and good \$60@80; eggs 23c; butter 30c; corn \$20 per ton.

Pennsylvania.

Lancaster Co., June 18.—The usual amount of corn and more potatoes than usual have been planted. Corn has come up very irregularly on account of extremely dry weather. The grass crop will be short. The early cherry crop was good and late ones promise well. Apples will be a light crop, but there are prospects of many peaches. Little spraying was done after blossoming. Eggs 18c; butter 30c.

Ohio.

Hancock Co., June 16.—The usual amount of corn and potatoes were planted, and early potatoes look good; corn is a good stand and is growing very rapidly. The first crop of alfalfa has been cut, and some hay is also being cut, but will be a short crop. Wheat and rye will make a good crop, but oats will be short. There was not much spraying done after blossoming; however, fruit prospects are good. Wool 22c; wheat 87c; corn \$1 per cwt; potatoes 75c; oats 39c; eggs 17c; butter 20c.

Harrison Co., June 15.—Harvest is almost here, with fine wheat and hay. Oats look good. The first cutting of alfalfa was good, and is in the barns in fine shape. About the usual amount of potatoes were planted, and they are up and looking good. Considerable spraying was done, and fruit of all kinds will be very plentiful. There are no cattle or hogs ready for market yet. Young chickens and turkeys are doing fine. Wool is nearly all sold at 24@27c; butter 24c; eggs 18c; butter-fat 26½c.

Medina Co., June 20.—Hay and oats show the effects of the past three weeks' drouth. More than the usual acreage of corn was planted and is doing well. Prospects for fruit are good. Wool 24c; eggs 18c; butter 26c; wheat 90c; hay \$13.50.

Warren Co., June 16.—The average acreage of corn was planted, and a good stand is reported in the early planting. Early planted potatoes were damaged somewhat by the drouth, but the crop generally promises well. The first cutting of alfalfa is over, and a good yield is reported. Meadows were cut back by drouth; many are now cutting clover. Fruit prospects are above the average, owing to more spraying than heretofore. Corn 80c per bu; wheat 92c; oats 50c; hogs \$8; cream 24c per lb; country butter 18c; eggs 15c.

Ashtabula Co., June 16.—Corn is all planted, and is a fine stand. There are still some late potatoes to be planted. Oats are showing the effects of the dry weather. Meadows are looking fine, and prospects are for a bumper crop of hay. Strawberries are quite plentiful at 6@8c per quart. There will not be much fruit here. Grapes are contracted for at \$45 per ton. There is not much stock changing hands. Eggs 18c; butter 15@20c; hogs, dressed 11½c; baled hay, delivered \$12.50@13.75; beef, dressed 8@10c; milk \$1.15 per cwt.

Clermont Co., June 18.—About the usual acreage of corn was planted and most of it is looking fine. More potatoes than usual have been planted, and promise a fair crop. The acreage of tobacco is larger than last year, and is looking fine. Rye and oats are looking fine. The first crop of alfalfa has been cut, with a good yield, and good prospects for a fair second crop. A great many farmers have been

spraying their orchards, and the prospects for the fruit crop are fair. Butter 18@23c; eggs 16c.

Guernsey Co., June 15.—Wheat is fine, but the drouth has cut oats and meadows. Hay will be short and thick on the ground. Corn is backward owing to the late planting, and potatoes are also late. More spraying was done this year than usual. There will be a good crop of cherries and apples. The mines have not been in operation since April, and there are 3000 idle men in the Guernsey valley. Wool, unwashed 25c; washed 30c; pigs \$5@6 per pair.

Illinois.

Marion Co., June 16.—The usual acreage of corn and potatoes were planted. There will be a considerable amount of peas and millet sown. Wheat has been cut and is fair. Oats are a complete failure, as it did not get high enough to mow for feed. Meadows and pastures are poor. The apple crop is light; peaches and pears are fair. More spraying is being done. Wool 22½c; eggs 16c; butter 15@22c; cattle \$4@6; lambs \$6.

Wisconsin.

Pierce Co., June 16.—All spring work was considerably delayed by excessive rains. Grass of all kinds, small grains and late planted corn are growing faster and with a more healthy color than for years. Spraying is nearly over. All the wool clip is being "pooled" as there are several associations in this county, and all stock is sold through these organizations. Supplies are bought by the carload and divided. There is about the same amount of corn planted as last year. This county is well adapted to dairying, and is prosperous. Only blood stock is approved and 100 head of cattle were recently imported from Europe. Wheat 80c; oats 32c; barley 45c; corn 60c; timothy \$1.50 per cwt; wool 22c; potatoes 60@65c; dairy butter 20c; creamery 30c; eggs 16c; hogs \$7.25; veal calves 6½@7c; sheep \$3.50; lambs \$5.50@6; hens 10c; springs 16c.

Polk Co., June 19.—There is a larger acreage of corn planted than in former years, and about the usual amount of potatoes and beets. All grain crops never looked better. Haying will begin in about ten days, and will be a heavy crop. Farmers are busy cultivating corn. The fruit crop is not very promising. Eggs 16c; butter 29c; small pigs \$2 each.

Iowa.

Osceola Co., June 10.—The crop outlook was never brighter than this season. Farmers are almost through cultivating corn for the first time, and the stand is excellent; a larger acreage was planted than last year. Clover is beginning to bloom. Pastures are doing well. Fruit trees blossomed full; no spraying is done. Local prices: Eggs 16c; butter-fat 24c; chickens 10c; corn 60c; wheat 85c; barley 48c; hogs \$7.50.

Nebraska.

Wayne Co., June 12.—There is a larger corn crop than usual, on account of some winter wheat being destroyed by a wind storm, necessitating the planting of wheat fields to corn. Moisture conditions are ideal, and all crops are making a rapid growth. The fruit crop is good, and meadows are excellent.

Todd Co., June 14.—A large acreage of corn was planted, but very little small grain sown. All crops look promising, and there is quite a bit of feed on the prairie everywhere. The fruit trees that have been planted out are growing well; no spraying has been done. Wheat 70c; oats 45c; corn 56c; rye 45c; butter 20c; eggs 15c.

West Central Otoe Co., June 15.—We are having plenty of moisture, and the ground is thoroughly soaked. Pastures and meadows are doing fine. The first crop of alfalfa has been cut, and the second crop is coming on nicely. A large acreage of corn was planted, and is doing fine, most of it being cultivated for the second time. Potatoes are doing well, and some are large enough for use. Wheat was damaged considerably by Hessian fly; oats are heading out. Fruit prospects are bright, and cherries are ripening now. Very little spraying was done after blossoming. Eggs 15c; butter 20c; cream 20c per lb; corn 71c; wheat 80c; oats 40c.

Colorado.

South Weld Co., June 14.—There are large quantities of potatoes grown here, and the crop is doing well. Pastures and meadows are fine. There are many thousands of acres of cabbage, tomatoes and peas grown, and all look fine, as the moisture conditions have been excellent. Winter rye and wheat are all headed, and spring wheat and oats are good. Farmers are irrigating small grain and garden truck, and there is plenty of water in reservoirs and river. Eggs 17c; butter 30c; butter-fat 32c.

Washington.

Klickitat Co., June 12.—The weather is ideal, and spring crops are in

(Continued on page 15).

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Practical Science.

COSTS AND PROFITS IN FRUIT GROWING.

BY FLOYD W. ROBISON.

One of the most commendable signs is the tendency on the part of farmers to inquire into the costs and profits of their various farming operations. There is no more reason why a farmer should ignore the cost items and expenses of his business than there is that the business man in any other line of operation should be oblivious to the actual expenses of his business. If farmers generally knew more about the actual costs of the production of the various commodities which they raise it would lead, we believe, to a more intelligent marketing of products, better profits, and greater satisfaction in farming as a business.

Some time ago we attempted to analyze the market milk situation, showing the real expenses of the business and indicating to the dairymen what it would be necessary to sell their product for to secure satisfactory profits. There have been since then one or two other articles bearing on the cost of production in other lines and we can think of no information which is of greater value to the producer than information of this kind.

Dr. U. P. Hedrick, horticulturist for the New York Agricultural Experiment Station, at Geneva, has had published a bulletin dealing with the costs and profits from an apple orchard which was under close observation by the Geneva station. The facts recorded and the arguments presented are so logical and conclusive that we decided to present them for the consideration of our readers.

The bulletin itself is No. 376, published by the Department of Agriculture, and may be had upon application to the Experiment Station at Geneva, N. Y.

The orchard under consideration is known as the Auchter orchard situated a few miles west of Rochester, N. Y., in which the Geneva station has been experimenting on the effect of sod mulch and tillage, during the past ten years. It was a typical western New York orchard and at the beginning of the experiment was entirely stocked with Baldwin trees 27 years old. Of course, these same trees are now 37 years old.

The annual yield of fruit during the ten years past, beginning with 1904, is as follows:

Year.	Barreled apples bbl.	Per Tree. Culls and drops bbl.	Total yield bbl.	Barreled apples bbl.	Per Acre. Culls and drops bbl.	Total yield bbl.
1904	2.45	2.13	4.58	66.53	58.08	124.61
1905	1.42	.74	2.16	38.59	20.12	58.71
1906	2.67	1.44	4.11	72.69	39.12	111.81
1907	2.41	.88	3.29	65.53	23.79	89.32
1908	4.18	1.41	5.59	113.85	38.25	152.10
1909	2.37	1.64	4.01	64.63	44.57	109.20
1910	1.92	.69	2.61	52.21	18.80	71.01
1911	3.41	2.19	5.60	92.84	59.60	152.44
1912	3.86	1.70	5.56	105.05	46.17	151.22
1913	4.41	1.02	5.43	120.00	27.62	147.62
Totals	29.10	13.84	42.94	791.92	376.12	1,168.04
10-yr. av.	2.91	1.38	4.29	79.19	37.61	116.80

The handling of this orchard was above that of the average because it was well taken care of and most orchards are not taken care of, but as the cost of labor, etc., has been considered in these items, the net proceeds show really what any farmer should be able to do with his orchard, provided he gives it the care which it should have.

The Cost of Production.

To arrive at the cost of production the first item, therefore, is to ascertain the value per acre for the investment in the orchard. Dr. Hedrick places this value at \$500 per acre, and figures the interest on this investment at five per cent. This is not a high

valuation, as will be readily seen, and yet probably it may be considered high by many farmers. An acre of Baldwin trees 27 years old, in good condition is, we think, worth \$500. With interest at five per cent the first item of expense, therefore, becomes \$25 a year, the interest on the original investment.

Next is the taxes, which, of course, is a very variable proposition. Dr. Hedrick sets aside \$1.50 per acre per year for taxes, which is probably ample. Next comes depreciation of outfit which he places with reason at 20 per cent. Then comes the cost of tillage per acre, at \$7.39. This includes plowing the ground in the spring, harrowing it, rolling it, and cultivating it on an average of seven times per season. Likewise the labor of putting in the cover crop, but not the cost of the seeds for the cover crop. The cost of the seed per acre is estimated at \$2.74. To this is added the cost of pruning, which was \$3.56 per acre; then for the 27 trees to the acre the cost was therefore 13.1 per cents per tree. The cost of spraying was \$11.28 per acre or 41.8 cents per tree. The spray consisted of Bordeaux mixture, arsenate of lime and lime-sulphur, and arsenate of lead. Spraying was conducted three times per season for the first five years and twice per season for the second five years. The expense of supervision was \$30 per acre, or \$1.10 per tree.

Figuring these various costs to the barrel of apples based on the average production, we have the following cost sheet for a barrel of apples:

Interest on investment, per bbl.	\$.21
Taxes, per bbl.	.012
Tillage, per bbl.	.063
Pruning, per bbl.	.03
Spraying, per bbl.	.096
Cover crop, per bbl.	.023
Supervision, per bbl.	.25
Harvest expense, (picking, sorting, packing, hauling).....	.244
Total, per bbl.	.93

To this may be added the cost of the barrel, or 36 cents, making a total cost of production per barrel of \$1.29.

The above cost, \$1.29 per barrel is, as will be seen, for an orchard kept in first-class condition, with pretty fairly good allowances for the various cost items. The returns of this orchard were as follows:

What the Crop Brought.

For all barreled stock sold, the average price received was \$2.60. For culls and drops, which were used for

on the original investment of \$500 as the annual ten-year dividend from the orchard.

We can do no better then, in summing up these remarks on this bulletin, than to quote the general statements of Dr. Hedrick.

The Summary Quoted.

"In closing, several general statements must be made:

"The first of these is that the pan has not been skimmed in the Auchter orchard work and the milk that is left is equally as good as that which was taken. This orchard, barring accidents, will do as well, or rather better, during the next 20 years than it has in the past ten.

"Secondly, as good or better dividends are coming from many New York apple orchards similarly situated and similarly cared for. The figures given are a fair average for a Baldwin orchard in its fourth decade. The cost of production is, if anything, high since the state cannot do work as cheaply as an individual. The extra cost, if such there be, has been offset however, by the skill and efficiency with which Mr. Auchter, in direct charge of the work, has managed every detail.

"Third, the profits of this orchard are probably many times as great as those from the average plantation in New York. Indeed, if the financial history of every apple tree in New York could be written it would be found that the total cost of all quite equals the receipts from all—in other words, many are losing and few are winning. This is the history of financial endeavors in all industries."

COST OF PASTEURIZING MILK.

According to tests made by the Department of Agriculture, the average cost of pasteurizing milk with a properly designed and properly operated plant, is \$.00313 a gallon, and of cream \$.00634 a gallon. These tests also showed that the "flash" process, by which milk is raised to a temperature of 165 degrees F. and kept there for a moment only, is more expensive than the "holder" process, in which milk is maintained for 30 minutes at a temperature of 135 to 145 degrees.

It was found that many milk plants and creameries do not attempt to make any use of the heat in the exhaust steam from their engines and auxiliaries. This heat would be sufficient, in many cases, for all the pasteurizing done in the plants, if it were properly utilized instead of being permitted to go to waste. Another common source of waste was found to be the faulty arrangement of apparatus and leaky piping. The loss from these causes may run as high as 30 per cent of all the heat required. In considering the cost of pasteurizing, the investigators estimated the life of the necessary apparatus at only four years, because the entire equipment must be taken apart after each operation in order to clean it.

BOOK NOTICE.

On account of the high cost of living, gardening is increasing in popularity as an advocacy for men in all lines of work. Too often our knowledge of gardening is limited to the directions on the seed package, and we would appreciate our garden work more if we got a better understanding of its principles. Therefore "The Beginner's Garden Book," by Allen French, is a useful book, for it deals with all features of garden work and is valuable to the experienced as well as beginners. It can be recommended to those who wish a practical garden book, and also for school purposes. Published by Macmillan Co., New York. Price \$1.

CATALOG NOTICE.

The Holt Mfg. Co., Peoria, Ill., send an illustrated folder giving information about Caterpillar tractors made in a variety of sizes suited to all kinds of farm and other work to which the tractor is adapted. Mention Michigan Farmer when writing for this literature.

Veterinary.

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Dropsy—Rheumatism.—Have a colt seven weeks old that is stiff in all four legs; when down is unable to get up without help; sucks fairly well, but the mother has a swelling under belly and is worked part of the time. C. W. D., Marine City, Mich.—Give your mare a tablespoonful of powdered nitrate of potash at a dose in feed or water two or three times a day. Also give colt 5 grs. of sodium salicylate at a dose three times a day. If joints are swollen, apply alcohol twice a day. You should have treated navel of colt.

Roarer—Heaves.—I bought a horse this spring; three days later he began to heave and cough and seemingly choke; besides, he made quite a noise through nostrils. This horse is only eight years old, a good worker, and I would like to give him something that will relieve him. W. L., Jr., Allenville, Mich.—Feed no clover or musty, badly cured fodder and he should be fed a good quality of food; grain and grass is the best summer food. Give 1 dr. of ground nuxvomica, 1 dr. powdered lobelia and ½ oz. of Fowler's solution at a dose in damp feed three times a day. Kindly understand that he should not be fed much bulky food and he should be exercised every day.

Rheumatism—Sprain.—I have a 7-year-old mare that first went lame in one hind leg, then in the other, and one Vet. tells me it is rheumatism and the other calls it sprained ankle. Lately I drove her to town and she became so lame that I had to leave her over night. C. S., Omer, Mich.—Give her 2 drs. sodium salicylate, 1 dr. powdered colchicum and 1 dr. of powdered nitrate of potash at a dose in feed two or three times a day; also apply equal parts turpentine, aqua ammonia and raw linseed oil to fetlock joints, if swollen, every day or two.

Rheumatism.—I have a pig four weeks old that is rheumatic and does not care to move around. J. S., St. Clair, Mich.—Give pig 2 grs. sodium salicylate and 3 grs. powdered nitrate of potash at a dose three times a day.

Snuffles.—I have five young hogs three months old that are troubled with snuffles. A. M., Chassell, Mich.—Give each pig 1 drop fluid extract belladonna at a dose two or three times a day, and 2 grs. of powdered sulphate iron.

Pigs Root Each Other.—Can any of the readers of the Michigan Farmer tell me the cause of pigs rooting each other? These pigs are fed liberally on low-grade flour, middlings, ground wheat, skim-milk, and have a clover field to run in. H. W. B., West Branch, Mich.—Lack of exercise and feeding an unbalanced ration are perhaps the most common causes of rooting. Perhaps the breed of hogs you have are nervous and restive.

Leucorrhoea—Caked Udder.—On April 6 one of my two-year-old heifers calved, but had to be assisted; since then she has been troubled with leucorrhoea and one-quarter of udder is caked. I applied fluid extract of poke root and gave her saltpeter as recommended for a similar case in this column. M. E. T., Marshall, Mich.—Give your cow a tablespoonful of hypo-sulphite of soda and apply one part iodine and 15 parts lard to caked udder three or four times a week. If she still has vaginal discharge, dissolve 2 grs. sulphate of zinc in each ounce of water that you inject her with, and she should be treated daily.

Cow Does Not Come in Heat.—I have a cow that had an attack of compaction last winter, but recovered. When she freshened she did not clean, therefore our local Vet. removed afterbirth. Have not noticed her in heat since she calved and I am anxious to breed her. W. W., Coleman, Mich.—Give her 1 dr. ground nuxvomica, 3 grs. of phosphorous and 3 drs. of ground capsicum at a dose in feed twice a day.

Cow Leaks Milk.—I have a cow that commences to leak milk every afternoon between two and three o'clock. I would like to know how to prevent it. W. S., Adrian, Mich.—Milk her three times a day.

Stifle Locking.—I have a two-year-old colt that has a queer affliction and I am unable to figure out what ails him. In the morning when let out of stable, either one or both hind legs seem to be stiff in hock and the toe drags on ground then suddenly with a jerk which is followed by a crack, colt moves fairly well. The sire of this colt had bog spavin. D. M., Weadock, Mich.—The stifle cap partially slips out of place, making it impossible for leg to flex. Clip off hair and apply one part powdered cantharides and six parts fresh lard

to stifle joints three times a month and your colt will get well.

Mare Passes Urine too Often.—I have a ten-year-old mare that when driven passes urine every time she is stopped and frequently her water is tinged with blood. C. Q., Marion, Mich.—Mix together equal parts of powdered nitrate of potash, bicarbonate soda and salt and give a dessert-spoonful at a dose in feed night and morning. A change of feed would perhaps help her.

Chronic Cough.—I have a horse eight years old which has a cough, some days it affects him more than others; glands of throat are some swollen. A. K. D., Shelbyville, Mich.—Mix 1 oz. of guaiacal in 15 ozs. of raw linseed oil and give 1 oz. at a dose three or four times a day. Apply one part tincture iodine and three parts camphorated oil to throat daily.

Nervousness.—Whenever I drive my four-year-old mare she tosses her head considerably, and our local Vet. is unable to tell what causes it. When the bridle is off she stands perfectly quiet. G. L., Lamb, Mich.—Her teeth may hurt her when bit is in mouth and she is being driven. A large smooth bit that is long dropped low in mouth, a nice fitting bridle and a quiet driver is about all that can be done for a case of this kind. If the mouth is sore or tender, dissolve 1 oz. of borate of soda in a quart of water and wash out mouth three times a day.

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equal parts alcohol and hot water to ankle three times a day.

Rheumatism-Inflamed Knee-Swollen Tendons.—I have a six-year-old cow that shows symptoms of rheumatism. She has been sore and stiff since early part of March. The knee of my five-year-old horse is inflamed and back tendons are swollen and tender. L. D., Port Hope, Mich.—Give your cow a tablespoonful of powdered nitrate of potash and a teaspoonful of powdered colchicum at a dose twice a day; also give her 2 drs. sodium salicylate three times a day. Apply one part turpentine, one part aqua ammonia and three parts olive oil to knee and back tendons every day or two.

Barren Heifer.—I have a registered Jersey heifer which comes in heat every 10 to 14 days and fails to get with calf. F. T., Springport, Mich.—Give 40 drops of fluid extract stramonium and a teaspoonful of powdered nitrate of potash at a dose three times a day. Her getting with calf is doubtful.

Cow Does Not Come in Heat.—I have a cow that came fresh January 7, 1914, and has not been in heat since. She is a good milker and so far as I can tell, in good health. J. C., Whitmore Lake, Mich.—Give her 1 dr. ground nux vomica, 2 drs. of ground capsicum and 3 grs of phosphorous at a dose two or three times a day. The phosphorous should be dissolved in a tablespoonful of olive oil before it is given.

Wounded Teat.—My cow, while stepping over low wire fence cut end of teat; since then have milked her through tube, but udder is now quite inflamed and gargety. I applied one part iodine and 20 parts lard. J. J. S., Copemish, Mich.—Apply equal parts powdered alum, oxide of zinc and boric acid to wound twice a day. Unless you are painstaking in the cleaning of milking tube, you will infect udder; perhaps this is what caused udder to swell and inflame. Apply one part alcohol and two parts warm water to udder twice a day. Milk her out clean three times a day and hand-rub udder gently two or three times a day.

Sun Scald.—I have 20 pigs three months old that have some kind of skin diseases that appears to me like sunburn. The skin back of ears and on back cracks open, peels off and leaves body raw. Whatever this trouble is it causes itchiness and pigs rub so much that the body is covered with sores. R. G. S., Haslett, Mich.—Apply one part oxide of zinc and six parts vaseline once or twice a day. Keep your hogs in the shade when sun is shining bright.

Congested Udder.—I have a cow that came fresh June 7, cleaned all right, but udder does not seem to fill properly and I have thought bag a little gargety. B. D., Newaygo, Mich.—The udder should be gently hand-rubbed two or three times a day and give her a dessertspoonful powdered nitrate of potash at a dose in feed twice a day.

Paralysis of the Crop.—For the past 30 days I have lost quite a few little chickens who seem to tumble and fall without showing any symptoms of sickness. Up to a certain time the appetite is fine. Mrs. M. J. C., North Star, Mich.—The fowls over-eat of corn and wheat, causing paralysis of the crop. Pour a small quantity of sweet oil in the mouth and cause the bird to swallow it, then manipulate that portion of the crop nearest the throat by careful pressure and squeezing between the thumb and finger. Suspend the bird head downward and by manipulation and pressure, you will perhaps be able to empty crop through mouth. If its contents cannot be removed in this way, cut crop open, empty it, stitch it up and apply one part iodoform and 19 parts boric acid to wound twice a day. Careful feeding of easily digested food will greatly assist in preventing this sickness.

Chorea.—I have a hound pup seven months old that is just getting over distemper, but now he has a jerking of head and hind legs, but does not appear to suffer much pain. A. S. C., McCords, Mich.—Give him one-sixtieth of a grain of strychnine and 2 grs. of potassium iodide at a dose in feed two or three times a day. Also give him five drops Fowler's solution twice a day.

Cow Does Not Come in Heat.—I have a young cow that came fresh two months ago, since then she has never been in heat and I would like to know what to give her or do for her to bring her in heat. R. M., Carsonville, Mich.—A forced service will sometimes bring on heat; also giving 1 dr. of ground nux vomica, 2 drs. of ground capsicum and 1 oz. of ground ginger, given at a dose in feed night and morning will have a tendency to produce heat. By giving phosphorous and damiana in conjunction with these drugs will assist; however, you had better try the first prescription.



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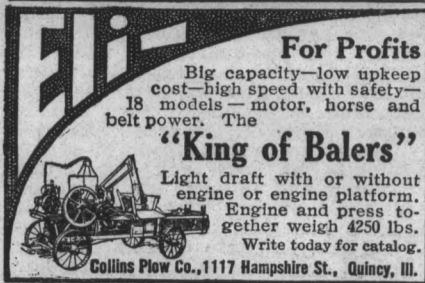
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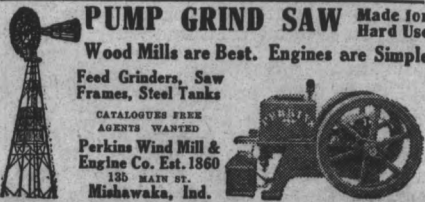


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