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# THE ONTARIO FARMER,

A MONTHLY JOURNAL OF

Agriculture, Horticulture, Country Life, Emigration, and the Mechanic Arts.

VOL. III.

HAMILTON, SEPT., 1871.

No. 9.

## The Farm.

### HINTS FOR THE MONTH.

September is one of the pleasantest months of the year. As June is a delightful compound of spring and summer, so September is an agreeable mixture of summer and autumn. We have mid-day heat, but it is tempered by cool nights. Indeed, some time this month, Jack Frost may be expected to appear on the scene, committing his first fall depredations on our melon, tomato, and grape vines, blanching the corn leaves, and putting the first faint hues of loveliness on the forest foliage. Summer will soon abdicate the throne, and after a brief October interregnum, Winter will be crowned king. On all the beauty and life of nature may now be clearly read the inevitable doom, "PASSING AWAY."

It has been well remarked that "when autumn days come, Nature, like a retired merchant, changes its manner from thrift and bustling industry to languid leisure and ostentatious luxury." But the farmer cannot yet play the retired merchant, though the air is deliciously restful, and the scenery suggestive of repose. The hurry of harvest is over; but not until winter fairly sets in can the busy farmer think of holiday. Chief among the duties of this month is the sowing of fall wheat. This crop is not so widely grown as it formerly was, owing to the many uncertainties and disappointments that have attended it of late years. It is a question worth considering, whether it is not falling too much into disuse. In view of the superior quality and higher value of winter

wheat, is it not wise to sow it, even though some risk is run of failure? The loss of seed is all that is hazarded, for the preparation of the ground is so much clear gain, even if it is found needful ultimately to sow spring wheat. If our farms had not been so absurdly cleared of everything in the shape of a green tree, and if protective belts of timber had been left at proper intervals, one great cause of the failure of this important crop would never have existed. From the unsheltered condition of our grain fields, and our exposure to drought in summer, and bleak winds in winter, we are suffering the pains and penalties resulting from the wholesale and inconsiderate destruction of our forests. By all means have the patch of winter wheat. And if there be a field so situated as to be a protected nook, shielded by the woods from bleak wintry winds, let that be devoted to this crop. It will pay to put land in the best order for fall wheat. It should be well enriched and made as mellow as possible. The best of seed should be got, carefully cleaned from all admixture of weeds or other grain, brined to destroy smut, and put in by a drill, *by all means*. All grain crops do best drilled in, and it is time all broadcast sowing were altogether abandoned; but there is no crop that shows the advantage of the drill as does fall wheat. If the land is to be seeded down with timothy, it is better to defer that operation a fortnight later, than to sow the grass seed with the wheat. Clover seeding should be attended to as early as possible the ensuing spring. Fall ploughing is an operation that should not be neglected, and after the seeding for winter crops is finished should be continued as

long as the state of the weather will permit.

Various other farm operations are in order this month. Not the least important is the care of fattening animals. It is a great mistake to defer feeding them for the butcher too late in the season. They improve in condition, if well fed, much more quickly in early fall than when winter sets in. This applies especially to hogs. They should be penned early, their sties kept scrupulously clean, and their food given regularly and abundantly. "Never," say the *Illustrated Register*, "keep them waiting for food, never let them squeal off their flesh." When we have the usual downpour of fall rain, September is a good month for butter-making. The winter supply should now be laid down, if it has not been already done. Corn must be harvested this month, and properly cured, the stalks will make excellent winter feed. This is a source of fodder supply which is too little thought of by the generality of Canadian farmers. Many odd jobs lie in wait to occupy spare days and hours at this time of year. Meadows may be top-dressed, if there be well-rotted manure to do it with. Happy is the farmer who, notwithstanding the demands of the turnip field and fall wheat patch, has choice dung to spare for the meadow. It protects the grass crowns, and affords a cherishing mulch, while it stimulates an early and vigorous growth, when spring comes. Grubbing up bushes and briars, exterminating thistles to be found here and there in pastures, rooting out mulleins and other weeds that disfigure the fence corners and road sides, draining swamps if the weather be sufficiently dry, clearing stones off pasture lots and fallows, preparing root cellars for being stored, picking out weeds from among turnips, to prevent their going to seed, fixing up cattle-sheds, repairing fences, are not these "chores" enough to show that there need not be an idle minute on the farm, betwixt this and the setting in of winter?

September is the month during which most Agricultural Exhibitions are held. It should never be deemed lost time, wasted money, or mere holiday-keeping to attend these. Much useful information may be obtained at such places, that is, provided those who go keep their eyes and ears open. "Eyes and no eyes," might be the title of a descriptive account of the manner in which two classes of persons,

the observant and unobservant, demean themselves at shows. An enquiring mind will find enough to engage its best attention and waken its fullest energies on such occasions, while a dull, sleepy mind will go and come like a door on its hinges. These exhibitions do much to keep the spirit of improvement alive, and are well worthy of encouragement and patronage from all.

Beyond the pleasant work of in-gathering, and the ceaseless fight with weeds, there is not much to do in the garden this month. Strawberry plants may be set out, and with careful tillage, weeding and watering, will yield moderately next spring. Land for new gardens or orchards may be got ready for spring operations by thorough ploughing, manureing, and mellowing. We prefer to plant both fruit and shade trees in the spring, though fall planting has its advocates.

The apiary will need some attention in September. By the middle of the month the honey harvest will be quite over, even where there is luckwheat, and all surplus boxes not yet removed should now be taken off. Late or small swarms should be put together. One strong stock is better than two or three weak ones. Generally speaking, it is poor policy to feed bees, but if it must be done, now is the time, instead of disturbing them in winter. Watch against robbing, and if there are signs of it, contract the entrance to the hive, so that only a bee or two can pass at a time. Queenless stocks should either be joined to others, or supplied with queens. Look out sharply for the moth-miller.

#### DRILL IN BROADCAST SEEDING.

The sowing of the seed is manifestly one of the most important operations of husbandry. Much of the previous labor of the farmer goes for nothing, if the seed be not properly sown at its appropriate time. It is true that even after he has done his best, and committed his seed to the soil in the most approved way, and under the most favorable conditions, many accidents and unforeseen circumstances may diminish the farmer's harvest returns. The weather and the seasons are altogether beyond his control; while the prevention of insect depredations is partially so. Still at the same

time, it must not be forgotten that the measure of his success depends very much on his own persevering efforts, directed by judgment and skill. "If," says the author of the *Dictionary of the Farm*, "the farmer selects the best seed, chooses the proper season for sowing them, and has them carefully distributed and properly covered with earth, as their nature requires for the most perfect germination; and thus also protects them from the voracity of birds and insects, he will have a much greater prospect of success, under all circumstances, than if he were careless and negligent." The most common mode of sowing in this country is scattering the seed broadcast over the ploughed surface of the soil. By this process there is no certainty of the seed being uniformly covered.

Experience teaches that harrowing is only an imperfect method for effecting this object. The harrow buries some seeds too deeply, others not sufficiently deep, and a considerable proportion not at all. To ensure a full crop, therefore, the farmer is obliged to scatter an additional bushel or more per acre, than would be necessary, were a machine employed. It will be obvious, on a little reflection and calculation, that the saving of grain alone, in the course of a few years, by the use of a drill, would warrant its adoption on every farm. Such machines not only deliver the required proportion of seed with regularity, but deposit it at a proper depth beneath the surface. And as the plants appear in regular rows, weeds or thistles may be destroyed with facility, and the crop is thereby allowed to monopolize the entire nourishment of the soil. The air is allowed free circulation between the rows, and a stronger and healthier plant, and consequently a heavier crop is produced. There is every perceptible difference in the growth of drilled and broadcast wheat. The ears of the machine-sown grain, are larger, and the plants more uniform in size and height than those sown by hand. The superior vigor once apparent to any careful observer. The cost of a drill is, no doubt, pretty con-

siderable. This circumstance will unquestionably prevent its rapid general adoption; but the advantage to be derived from the use of the implement, some of which we have briefly noticed in this article, would, in cases where the requisite amount could be prudently appropriated for the purpose, more than compensate for the investment.

#### NEATNESS ABOUT THE FARM.

It does not cost as much to be neat and orderly as it does to be slovenly, and is much better to be neat, and is more agreeable and pleasant. In passing a farm, it is easy enough to tell whether its owner is a neat farmer or not. If the door-yard is strewn with old boxes, barrels, and farm implements, broken and otherwise, and the gate broken or minus, broken apple-trees lying in the orchard or thrown in the road, which is worse.

Are the fences straight from one point to another, or do they wind serpentine like, using up twice or thrice as much land as is necessary, and nearly hid with briars and young trees? Are the roads filled with fragments of stumps, stones, or logs, brush, and every other kind of unmentionable rubbish that could be much better and more profitably disposed of? These are marks of idleness; carelessness, and often drunkenness.

Again a neat farmer has his rows of corn, potatoes, &c., straight across a field; they are easier made so; are easier and cheaper worked, and there are many more hills to an acre; and how much better they look!

Many farmers think they cannot find time to keep things neat and tidy; that the general farm-work is all they can manage. This might be so if these habits of slovenliness did not hinder and make three times more work, than it would take to keep them straight. If on some day after a rain, when the land is too wet to work, any one will go straightening up things a little, he will be surprised to see how many of these odd jobs can be done in a few hours, and what a difference can be made in the general appearance of things, and many little things can be fixed in ten minutes which if neglected may cost a dollar to repair.

A better way is to set apart half a day in every week—say Saturday afternoon—for this work, and in a few weeks it will be found to be the most profitable half-day's work in the week. A minute of many little things can be kept during the week, and on Saturday afternoon the list cleared up.

A little care about building fences straight will add a few more rows of corn or rods of grain to the crop on both sides of the fence. I have made it a rule never to put anything in the road. Brush or stumps I burn. Stones I pile out of the way or where they will be needed. I am sorry and almost ashamed to say that many farmers make the road a general receptacle of rubbish of every kind. Instead of having clean and green roads, they are nearly blockaded. I was surprised a few weeks since, while travelling a circuit of a few miles, to see the vast amount and variety of these obstructions. Runaways often occur by teams getting frightened at objects in the road that have no business there, and no true gentleman would ever put them there.

Every one seems to think the little he puts in the road will not be noticed, but all thinking so fills the road.

Let every farmer (and any other man) keep his rubbish out of the road and clean up his road, and the country will look better.—*Western Farmer.*

#### LUCERNE AS A SOILING CROP.

The following, in the *Utica Herald*, was written by Richard Gibson, the stock manager for Messrs. Wolcott & Campbell, of New York Mills. We will only add that deep tith in the preliminary preparation, and perfect freedom from weeds, are indispensable to success in raising lucerne. No plant is more impatient of the interference of weeds:

"Respecting the cultivation of lucerne, I will give you my experience with great pleasure, as I feel convinced that it is a soiling crop which has only to be tried to be more generally grown. It is essentially a soiling crop, being ready to cut in the spring before red clover, and continuing to produce heavy cuttings all through the summer, no matter how hot or dry. Last season, though unusually dry, did not appear to check its growth, as we were able to mow over one field five times; and another, only seeded last spring, was cut four.

"There are crops that will yield a greater weight of feed per acre at one cutting—corn, for instance—and which is a crop that lucerne cannot supplant, as it yields a very heavy weight of green food at that season of the year when most of our dairy farmers are requiring such. But as a soiling crop proper, I know of none that can compare with lucerne, and it is one that few farmers can afford to be without. It yields a heavy weight of feed all the summer, of excellent quality, and one that does not require the expense of ploughing and re-seeding after cutting, nor each year, as by proper management, on suitable soils, it will remain profitable five years.

"Its relative value, as compared with corn, is decidedly superior, our sheep and cattle not only preferring, but doing much better on it. In fact, corn with me has not proved a very satisfactory soiling crop—cattle fed on it generally losing flesh, until we have all about given over growing it for that purpose.

"The finest hay we have this winter, that is, the hay our calves and sheep prefer, is that with a little lucerne in it. Going on to the hay mow the other day, I saw a hole cut in it. Inquiring the reason, I ascertained that the shepherd had found where a load or two of hay with a little lucerne sprinkled through it, had been mowed away, and that he had been getting it for his sheep, as they ate it better than good clover hay.

"A rich, dry soil, with an open porous sub-soil, is the most congenial to the growth of lucerne; but it will succeed well on any soil that will grow red clover to perfection.

"The seed may be sown broadcast, or in drills ten to twelve inches apart. In England we generally followed the latter course, so that after each cutting, or as often as might be necessary, we could run through the horse-hoe to loosen the soil and destroy weeds, &c., and by these means the crop could be grown successfully two years. But here I

have generally adopted the former plan, sowing from twelve to fifteen pounds of seed per acre, as early in the spring as the season will permit.

"The soil should be thoroughly prepared in the fall by deep ploughing, and manuring with rich, well-rotted dung, or what would be perhaps better, thirty or forty bushels of bone dust per acre, there being less liability of having foul seeds introduced, as this is a crop that is easily choked or run out by weeds, &c.

"In the spring the soil may be lightened with a two-horse cultivator, or scarifier, making a fine surface mould. The latter is essentially necessary to get a good plant. The seeds being very small, will only require lightly brushing in.

"The after cultivation will consist yearly of a good top-dressing of well-rotted dung in the fall, and harrowing and rolling in the spring.

"As I said before, weeds easily choked it; it will therefore be advisable to select a piece of soil free from weeds, and sow after some hoed crops, such as root crops or potatoes.

"The first season will yield a fair crop, but the second, third and fourth will be the best."

#### PRESERVING POTATOES.

If grown in a lime soil, or with some fertilizer containing lime, as wood ashes, or some compost of which lime is a part, in the hill, we have them in perfection. What folly not to preserve them in the same perfection, the year round, or at least till the next year's crop is ready to take their place, if this can be done. But can it? Yes.

How? Look at an often observed fact, and you will have the secret. When a tuber is left in the soil over winter, if not too near the surface, where it will freeze and thaw too many times, it is always found when ploughed out in spring, in a fine state of preservation—not wilted—sound and hard as in autumn—cracks open in boiling—has all the mealiness and fine flavor of the previous October—in short, has retained all its fine qualities unchanged, from October to May. It is always so with tubers thus wintered, as thousands have observed.

Now let us look at the attendant conditions in which these tubers have been so finely preserved. They were not sunned. Some think it well to let potatoes lie under a scathing September or October sun, five or six hours, before storing them. They could hardly do a thing more calculated to hasten a deterioration. Every moment of sunshine on potatoes, when harvested, injures them. They were not aired, for being left in a soil, compacted by the fall rains, little air could circulate among them. They were in total darkness all winter. They were moist by reason of the fall, winter, and spring rains and melting snows. They were cool, nearly to the freezing point, and sometimes below it. They have then coolness, moisture, darkness, little air and no sun as the attending circumstances, or conditions, of their perfect preservation. If this does not teach us a lesson, it is because we are not quick to learn.

But there is another fact, tending to the same conclusion. There are farmers, who, for a long series of years, have practiced as follows: dig their potatoes late, carry them at once to the house, dump them through a side window into the cellar, with all the soil that naturally attaches to them, and then let them be till wanted for use, a part of them

as late as the following June, taking care to keep the cellar windows open fall and spring, and to open them in mild weather, during the whole winter.

It happens that those which fall near the window retain most of the moist soil that fall with them and are almost as completely imbedded in earth as are the stray tubers left in the field till the spring ploughing. Now if that portion of the year's stock, which is thus embedded in the moist soil be left till the last, these are found by many years experience, to remain fresh and good, hardly at all wilted; eyes hardly swelled till about the first of June. This implies a cool and damp cellar; and when these points can be obtained, there is not the least difficulty in a perfect preservation of the potato till as late as from the 1st to the 15th of June. The conditions, if we look at them, will be found to be nearly the same as in the other case,—no sun, little air, little light, moisture, coolness.

Now it cannot be necessary to describe minutely how these conditions can be secured, for the potatoes you would preserve in all their autumnal excellence, for spring and summer use. Let every one devise the best method for his own case. One who has a cool, damp cellar, so fitted with windows that he can easily keep the temperature low at all seasons may find that the best place to pack away potatoes, for spring and summer use. Another may find it better, in his case, to bury them, mixed with moist soil, in the earth. By throwing an extra quantity of straw over them in winter, and so covering them with straw or chaff, that the sun will not thaw it till late, he may preserve them almost at pleasure; for so long as the ground in which they are imbedded is kept cool, they will never grow nor wilt, nor will they lose any of the fine qualities they had the previous autumn. If the potato hole were on the north side of a building, or if a temporary structure of rough boards were piled over it, keep off the sun; either of these would be a help. I will only add that if those who have a fine crop of potatoes will devise some way to protect them from the sun, air, and light, from the moment they are dug; and to keep as many of them as are designed for spring and summer use, cool and moist till the day they are to be cooked, "they will find their account in it."—*Prof. J. A. Nash.*

#### INCREASE AND INTENSIFY THE MANURE HEAP.

A prize essay of the Illinois Agricultural Society for 1870, by R. Giddings, details the cheapest and most practical plan of increasing the farm-manure pile and saving its elements from waste, and which should be adopted by every farmer. His plan is simply to save every particle of the animal excrements, liquid and solid, with all its fertilizing elements intact, free from waste by washing, evaporation, or fire-fang. To do this he fills a stall, or large bin, in his stable, during dry weather, with pulverized clay, road scrapings, or common soil. With this he covers the floor of each stall three inches deep, and then places the litter for the animals' bedding on it; by this means, all the urine will be absorbed, and its wealth of nitrogen saved; and such is the absorbing power of dried earth, that one three-inch flooring will not be so thoroughly saturated in a long time as to require

replacing. He says his experiment required but one large bin of pulverized earth to absorb the urine of ten or twelve cattle during the stabling season; and that two men with a team filled the bin in one day. Dried clay was also applied to the pig pen and hen-roost, with the same ammonia-saving results; and if applied to the privy or earth closet, which is now being adopted, a great manurial as well as sanitary result would follow. The inducements for the use of dry earth are:

*First*—That it requires no apparatus or cash outlay.

*Second*—That the liquid manure of cattle is worth more than the solid, and is usually lost, but, under this practice, all is retained.

*Third*—The dry earth retains within it all the value, of which usually one-third or one-half is lost by fermentation, leaching, or evaporation.

*Fourth*—It gives much larger bulk of manure, each load of which is of double the value of ordinary farm-yard manure.

*Fifth*—That one ton of saturated earth is of more value than the same weight of even fresh saved dung.

*Sixth*—That the aggregate amount of plant food thus saved from the stalls is fully double and in much better condition for use.

His next experiment was the cheap manipulation of bones. He says:—"Our experience in the use of pure bone-dust and genuine superphosphate is so satisfactory that if it were not for the excessive freight rates charged by our railroad companies, we should use them more largely. Thus virtually shut off from these, we pursued the following plan to reduce bones into soluble plant-food." To make his own bone material he got from a foundry at the cost of \$1.60 a 32-pound cast-iron sledge, which, with the aid of a spring pole and an upright log set in the ground, he reduced bones to small pieces; then sifted out the finest, he crushed the coarser pieces over again; these fine pieces he composed in layers with fresh horse dung. After three weeks he forked over the pile and covered it with soil, and this was afterwards forked over till the bones were rotted and thoroughly mixed with the horse-dung and soil.

It is a great pity that our railroad corporations are not animated by the same broad principles of self-interest which governs the directors of the English roads. They carry all manures, even lime and plaster, at a mere nominal toll, well knowing that manure alone can increase the freight of those farm products, the transportation of which alone supports the road.

To save farm-yard manure from waste, and above all from fire-fang, Mr. Giddings uses both earth and water. He says "a covering of half an inch of soil will absorb every particle of escaping ammonia, but a thicker coat is desirable." A water-box on a one-horse cart is also used occasionally to stop a too active fermentation of the pile. There are other absorbents, rich in themselves, of plant food, which not only save but add both bulk and richness to the pile—muck, saw-dust, coal ashes &c. Go into your hen-house on a warm morning, and you will be oppressed with the effluvia arising from their droppings; spread over it a hod of coal ashes, or a basket of saw-dust, and the air is sweetened as if by magic; and it will keep the hens in good health besides increasing the manure if followed up every few days.—*Cor. N. Y. Sun.*

## VENTILATORS FOR STACKS AND MOWS.

It will be of little advantage to make a hole or two near the middle of a stack or hay mow unless it is open at the bottom for the influx of fresh air, and open at the top also for the eflux of foul air. When a ventilator is made in a stack, there should be an air passage from the outside of the stack to the bottom of the ventilator. Then at the top of the stack a wooden tube—round or square, having a hole two or three inches in diameter through it—should be set in the hay when the stack is being topped off. Two or three inch holes, or a square hole in the floor of a mow, should be made at the bottom of each ventilator. By this means a current of cool air will be kept in motion until there is no more warm or impure air to be carried out of the mow or stack.

The most convenient way to make a ventilator in a hay mow is to prepare a square box about five or six feet long, and sixteen or eighteen inches square, of thin boards, and place it where a flue is to be made in a stack or mow, and draw it up as the stack is built. When within five or six feet of the top, remove the box and have a wooden tube ready to set over the top of the flue.

In a mow the ventilator should be left open. The tube may be kept from dropping into the flue by nailing a piece of board on one side of it near the bottom. Then pile hay around it until it will stand alone. By this means an efficient ventilator will be formed. It is an excellent practice to put ventilators into long stacks and long mows about every ten feet. In a square or round stack, not more than twenty feet in diameter, two flues would be sufficient. A flue in a stack that is covered over with hay at the top, will not pay for the trouble of making. But if there is no more than a two inch hole open at the top, several barrels of foul air will escape per minute through it. By thus letting cool air into the middle of a mow or stack, hay that would otherwise "mow-burn," will be kept cool and will save well. A barrel is sometimes employed for making a ventilating flue. The barrel must be drawn up a few inches at once as the hay is stored around it.—*Pomeroy's Democrat*.

## QUALITIES OF HAY

Timothy for muscle; clover for milk; corn for fat. The timothy should be cured in full blossom or a little later. Clover should be cut when first reddening, before it is fully matured. This is the time, and the only time to cut clover. Then all the nutritive juices are in perfection. Such hay—or grass cured—has a slight laxative tendency—just what is wanted in winter. It will be greedily eaten, even when somewhat touched with mould—and give milk in profusion. This never fails. On the other hand, timothy, instead of secreting milk, will form muscle; hence, the hay for horses; and hence preferred so generally. Straw when early cut and properly cured—not dried—has somewhat the quality of clover. But oh, how neglectful we are about the curing of straw, when it is one of the finest of employments. There is a fragrance about such straw, and the pale-green tint, which make it a valuable and most pleasant fodder.

Timothy, then, for horses; clover for milch cows; and straw, well cured and cut, for either, it is excellent to mix with meal, or feed carrots and beets

with. We would, when thus fed, make but little difference between good barley or even oat straw, when early and properly cured, and timothy for stock, especially cows in milk. For young stock tender timothy is excellent. We are so reckless in feeding. We feed promiscuously—we feed what we have to feed without taking much pains to get a proper selection, or to prepare it well. For instance, we feed few cornstalks, raised on purpose for fodder, when yet this is one of the cheapest and one of the best hays that can be fed—and in the summer, in a drought, it is of the greatest advantage, fed out green.—*Rural World*.

## WOODEN DRAINS.

Strange as it may seem, after all our experimenting with wood and the tile draining material, we are likely to come back again to wooden drains of some sort under peculiar circumstances. They are pronounced to be on good authority superior to, as they are far cheaper than, tile-drains, where the wood is subjected to the vapour of carbolic acid. But even without this preparation, wooden water pipes, made in the best manner, will last two or three generations under ground. But as it regards the so-called Robbins process, it is not applied to logs, but boards, so that the logs of any perishable woods sawed into boards, and the boards subjected to carbolic acid, formed into square conductors and used as drains upon farms, will last, it is claimed, "forever," at a cost of not over a fourth or a fifth of that for tile, a heavy article and expensive to farmers living at a distance from a manufactory. Should this process turn out to be all that is claimed for it, the farmers of the country will find it a means of rejuvenating their lands by draining, which, while it will cost but little, will nearly double their productive capacity.—*Germantown Telegraph*.

## ADVANTAGE OF THE ROLLER.

The *Mirror and Farmer* thinks it strange that so few cultivators use this labor-saving instrument. The roller has long been favorably thought of in Great Britain, and considered very necessary in an improved state of husbandry. It cannot be used to advantage except on lands that are free from stumps and stones on the surface. They are useful in breaking the lumps of baked earth in a clayey soil, and for passing over newly-sown land that is to be laid down to grass, and the farmer will find he can mow or rake much easier on lands that have been rolled down. On dry land it presses down the soil and makes it less dry. A wooden roller should be about six feet long and about twenty inches in diameter, round, and of uniform surface. It is sometimes made of stone, and when once made will last an age. The spiky roller is much recommended by some English writers for mellowing clayey soils. It is also said to act beneficially in passing over old meadows that are grass-bound, for the purpose of making the grass more thrifty. The spiky roller is merely a wooden roller with iron teeth or spikes driven into it. They are about seven inches long, driven three inches into the wood, set four inches apart in diagonal rows round the roller; the outer ends to be sharp and square.

## FARM GLEANINGS.

The *Farmer's Herald* (Chester, England,) forcibly says;—"Mixed husbandry is needful to realize the full amount of profit which the farm properly managed yield; Every year the price of farm products varies—some will be high, and some will be low, and thus the farmer catches good prices for a part, if not in all; whereas, if he is wholly dependent upon one kind of crop, he may be wholly disappointed. A little sold of everything makes a muckle, and if one thing does not pay, another will."

The potato bug has reached as far east as Akron, Ohio, and is still, "marching on to the sea." In Kansas and Missouri it is dying out, and the people are confident that this year will close its career in that section.

The locusts are disappearing very fast where they have been so numerous this season. Seventeen years are required for one kind to reach the adult or perfect stage, and seven weeks comprise the lives of this species. Fowls, hogs, and squirrels eat them voraciously.

The farm of Senator Chandler of Michigan, near Lansing, comprises 3,087 acres, of which 900 acres are upland and the remainder marsh. The marsh has been drained so that it is comparatively free from water. Experiments are being made to test its value for farming and grazing purposes; and thus far with very satisfactory results.

The reports from the majority of the English hop yards are far from encouraging, and the prospects of even an average small yield are exceedingly doubtful.

At a meeting of the Brandywine Farmers' Club, in Chester Co., Penn., David Brauson showed an ear of corn, thirteen and a half inches long, and containing 2,456 grains.

Corn, sorghum, Hungarian and other grasses, grown upon the experimental farm of the Kansas Pacific Railroad company, in what has been called the great desert region, are on exhibition in Kansas City. The corn and sorghum are from ten to twenty feet high, and the Hungarian grass about four feet high.

The prospects of a good corn crop in Grady Co., Ill., is not flattering. Three weeks ago the prospect was good for the heaviest crop ever known, but the draught has prematurely ripened the corn, so that the growth is checked, and a heavy rain now could not fill out the ears. The old farmers, who are well-informed, put the crop at from one-half to two thirds the yield this portion of the country would have produced but for the drouth. Nearly every day for two weeks the thermometer has gone above 100 degrees on the prairie.

An artificial whirlwind blew at Glen's Falls, New York, a few days ago; it was caused by a farmer, who, wishing to burn a fallow of about fifteen or twenty acres, ignited the brush at several places at the outer edge. The flames rushed towards the centre and assumed a rotary motion, which increased in velocity till a terrific whirl wind was formed, which tore up small trees, root and branch, and frightened everybody who witnessed it. A column of smoke rose to so great a height that it was visible for many miles, and a noise as loud as thunder accompanied this singular phenomenon.

A correspondent of the *Massachusetts Ploughman* says 'he ox-eye dairy will not grow a second season in a field occupied by sheep; they bite it so closely as to effectually exterminate it. Give them an opportunity, and the lambs will take care of the daisies. On dairy farms, where only cows are kept, a very few cossests should be allowed to run with the cows. As the sheep are very fond of the "weed" and take that first, perhaps it would do to allow them to run a few days in the mowing fields in Spring and fall.

This is one of the "insect years." The West swarms with potato bugs, chinch bugs, and locusts; the Hessian fly and clouds of grasshoppers are devastating the fields of Los Angeles county, Cal; the black caterpillars are worse in Arkansas than ever known before, and are stripping the leaves of the forest; Virginia planters complain that never were the tobacco flies so numerous and destructive as this season; and throughout the South is dismay at the number, size and voracity of the mosquitoes.

It is stated, on good authority, that an acre of the best Lincolnshire grazing land—and it is a county famous for its grass—will carry an ox and a sheep "New Mayday to old Michaelmas," and that while grazing during this period the former will gain 280 pounds and the latter 40 in net weight of meat when slaughtered. The acre will thus yield 320 pounds of meat. Its produce of grass may be sixteen tons, perhaps more. This is one pound of meat for every hundred weight of grass; but we must remember that the grass of such land differs from the average in the quantity of its produce.

The editor of the *Gardeners' Monthly* says that the honey locust is an admirable hedge plant for cold climates, and is far better than any other plant where the soil is poor and thin. There is one great advantage which it possesses over other plants: The osage orange, for instance, has thorns on its young growth, and that is the end of them; but thorns come out of the old wood of the locust, and continue to come out year after year, branching and growing simply as thorns, and nothing will dare go through a hedge of this plant, even although there should be a tolerably large gap invitingly open.

A correspondent of the *Germantown Telegraph* writes:—"Thorough culture and high manuring are essential to profitable farming, and this is the right mode of farming. If ten acres of land can be made to produce twenty tons of hay, is it not better than to cultivate twenty acres for the same amount? It is less labor to get twenty tons of hay from ten than twenty acres.

A writer in the *Cincinnati Gazette* tells how he prevented smut in wheat; and as the time for seeding is near at hand it will be well for farmers to investigate this matter a little. The writer says:—"Being a practical farmer myself I would state that some years ago my wheat became affected with smut more and more every year. I endeavored to get rid of it by covering my seed wheat with water in a large trough, and then skimming off the smut. It did no good. My neighbors tried lime brine, sand, and various remedies, but to no effect. Finally by accident, I had the good fortune to discover a remedy.

"I had the year previous to sowing stored a lot of wheat on my kitchen loft over my cooking stove, this I used as part of my seed wheat. I had not



enough of it to cover my field and was compelled to use new wheat for the balance. At harvest next year any one could walk across the field and see the exact line where the two kinds of wheat met. I kept the pure (or old sown wheat) to itself and sowed that and that alone. I have never had any wheat effected with smut since."

According to the *Western Farmer*, of 26 varieties of potatoes planted on the same day at the Experimental farm of the Wisconsin University, the Early Rose is the most vigorous grown.

## The Live Stock.

### FOUL BROOD.

There is reason to fear that this fearful and fatal disorder is making its appearance in some parts of Canada, Mr. J. H. Thomas, in a recent number of the *Globe* says:—

Of late I have received several letters from bee-keepers saying their bees were badly affected with some disease, from which their description may readily be recognized as "foul brood." For the benefit of those who never seen any cases of it I will describe it in a word by saying that stocks affected with foul-brood give forth a sickening smell as of corruption, and on examination, large patches of brood are found dead and corrupting. There is at present much speculation as to the cause of foul-brood among scientific bee-keepers, and many remedies are suggested, but as yet the disease appears to be on the increase. We had hoped that it would never obtain a foot-hold in Canada, and that bee-keepers would be saved from its ravages; but we are to be disappointed. One bee-keeper writes to me, saying "the moth is nowhere to be compared with foul-brood." It is contagious, and a stock will become infected by robbing honey from an effected stock, and when it once gets into an apiary it is difficult to get rid of it.

We give below an article from the *American Bee Journal*, by Edward P. Abbe, in which he describes his manner of treating it. We would advise, however, that all effected stocks be immediately taken up, the bees destroyed, the honey strained and boiled, the comb made into wax, and the hives burned, or perhaps if well boiled they might be cleaned and saved.

#### CURE OF FOUL BROOD.

This is my second summer of bee-keeping, and all the duties pertaining to an apiary were entered into with the enthusiasm, and shall I confess it, the ignorance and carelessness of a novice. Yes, ignorance and culpable carelessness, for in gathering empty combs from various quarters, the disease was introduced and spread among my pets. One hive in particular, of empty combs, had the peculiar odor, perforated cells, and brown viscid fluid, with which I have since become so familiar this summer; and it seems unaccountable to me, how any person with the *Bee Journal* wide open and Quimby's instructions before him, could be so careless as to give such combs to his bees.

But such was the fact, and foul-brood spreading right and left. What shall be done to get rid of it? Shall Quimby be followed, purify the hive and honey by scalding, and treat the colony as a new

swarm; or shall the heroic treatment of Alley be adopted; bury or burn bees and hive, combs and all? The latter has sent me some fine queens; but the former has always given reliable advice, and I shall follow his instructions with two colonies which are past all cure, and reserve the other for treatment, hoping that I may find some cure, or at least palliative for the disease, and add my mite of experience, and, perhaps, useful knowledge to our *Bee Journal*.

Accordingly, June 8th, the combs of the two condemned colonies were melted into wax, the honey drained over and scalded, and the bees, after a confinement of forty hours, were treated like new swarms; and now, September 18th, are perfectly healthy and in fine condition for winter.

I will not occupy your valuable space with all the details of my experiments and fights (which lasted through three months) with the trials of doses of different strengths and kinds, with old comb and new, with young queens and old ones, and with no queens at all, and how, in doing this, I was obliged to keep up the strength of the colony for fear of robbers and of spreading the disease to my neighbors. Suffice it to say, that after two months I had made no apparent headway, although still determined to "fight it out on this line, if it took all summer" and my last hive. In fact, I devoted my apiary to the study of this disease, and, perhaps, death.

Starting with, and holding to the theory that foul-brood is contagious only by the diffusion of living germs of feeble vitality, (and I was strengthened in my conjecture in microscopical examinations by finding the dead larvæ filled with nucleated cells,) I determined to try those remedies which have the power of destroying the vitality of those destructive germs, those living organisms. And no remedies seemed to me more potent than carbolic acid and hyposulphite of soda. At first I used both, making one application of each, with an interval of one day, and with apparent benefit. But, attributing the improvement to the more powerful of the two I abandoned the hyposulphate and used the carbolic acid alone, and was so infatuated with the idea of its superiority that I did not give it up until three or four hives had become so hopelessly diseased that the combs were destroyed and the colonies treated to new combs (as it was late in the season), and freely fed with sugar and water.

The fourth hive was carried a mile away, the queen caged, and the colony strengthened with a medium sized second swarm. After all the brood, which was advanced, had left the cells, I transferred the colony to a clean hive; thoroughly sulphured the old hive with burning sulphur, and stored it away in a safe place for future experiments. I now thought my apiary free from the pest; but on thoroughly examining the whole, three new cases of foul brood were found—one very badly effected, and two slightly so, with perhaps twenty to forty cells diseased and perforated.

This was about the 1st of August, and again hyposulphite of soda was selected for the trial; and from the first application I have had the disease under control. Three days ago I examined the three colonies thoroughly, and found no new cells diseased in the two which had been the least affected; and in the almost hopelessly diseased one (as much diseased, in fact, as any of those that I destroyed,) an entire brood had been raised, with

not over fifty or sixty diseased and perforated cells with dead larvæ remaining, most on one comb, and nearly all the cells contained a new supply of eggs; this colony is certainly convalescent, and I think now, from the recent and second application of the hyposulphite of soda, is entirely cured. Still, I should not be surprised to find two or three, or even more, perforated cells after this second crop of brood has hatched, as the whole hive, honey, and comb, had been for so long a time so thoroughly saturated with the disease, and at least two-thirds of the cells had, before the *medicine* was used, been filled with putrid larvæ. If so, I shall treat it to a third dose.

The solution of hyposulphite of soda which I used, was one ounce to half a pint of rain water. With this I thoroughly wash out every diseased cell with an atomizer, after opening the cap; also spraying over the whole of the combs and the inside of the hive. The instrument I use is a spray producer, invented by Dr. Bigelow of Boston, and sold by Codman & Shurtieff of that city. There are two small metallic tubes, a few inches long, soldered together; and by placing the point of exit of the spray at the lower part of the cell, the whole of the contents of the cell is instantly blown out upon the metallic tubes. With a very little practice there is no necessity for polluting the comb with the putrid matter. Place the comb perfectly upright or a little leaned towards you, and there is no difficulty; yet, if a drop should happen to run down the comb, it would do no harm, but had better be carefully absorbed with a piece of old dry cotton cloth. I quite frequently do this with the bees on the comb, as it does them no harm, to say the least, to get well covered with the vapour.

It is not all injurious to the larvæ, after they are two or three days old, though it may be before that time, as I have noticed that after using the hyposulphite where there are eggs and very young larvæ, the next day the cells are perfectly clean.

There are many interesting points which have come up during the summer's fight, which I would speak of; but I have already gone beyond all reasonable bounds in this communication.—Edward P. ANNE, in *American Bee Journal*.

#### A SOUTH AMERICAN POULTRY FARM.

G. F. Pearce, Esq., of Freetown, Mass., contributes the following interesting article to the "People's Practical Poultry Book," recently published by D. D. T. Moore, New York:—

I propose to describe a poultry farm, where fowls are kept by the thousand, whose proprietor counts his gains therefrom proportionately. It is situated in the southern extremity of Chili, South America, where the rainy season of six months' duration, is as detrimental to the well-being of all fowl kind as the rigours of our own winters, and where great care and skill are very essential to satisfactory results.

Senor Don San Fuentes commenced his operations in poultry with a stock of two hundred hens and eight cocks, to which he has added, by natural increase from year to year, until now he has somewhere in the vicinity of six thousand. Their range is unlimited, as his farm covers three thousand and cuadradas, equal to seven thousand five hundred acres. To every fifty hens and two cocks is given

a house of their own, of which there are six or seven hundred on the place. These are placed two hundred feet apart, each way, thus isolating one lot from the other.

These houses are very cheap affairs, and are made by erecting two forked posts, eight feet long, and dist<sup>d</sup> at from each other fifteen feet. On these rests the ridge-pole. On both sides of the centre post, ten feet distant, a trench is dug a foot in depth. Then small poles are placed for rafters, one end in the trench and the other tied to the ridge-pole, two feet apart, then another set of poles tied crossways, also two feet equi-distant, and the framework is complete. This is covered over with thatch, which is found in plentiful abundance, and to be had for the cutting. The only framework about the house is the doors at the ends, both of which are four by six, and contain each a window pivoted in the centre of the sash, to be opened or shut as the requirements of ventilation demand. Each house has its complement of twenty boxes for laying placed under the eaves, and partly concealed by bundles of straw.

Near the family residence is a large building, devoted to the storing of grain and eggs, nursery for sick hens, a long room for hatching, and another for slaughtering purposes. In the sick room is arranged a series of boxes; each one large enough for the comfort and convenience of its solitary occupant, who is there placed, and treated for its malady with as much care as if its value was dollars instead of cents, and with such skill that the ratio of deaths has been one in two hundred and eighty.

The sitting department is also provided with boxes some three hundred in number. Here all are brought from their respective coops as soon as their incubating propensity shows itself, and placed upon their quota of eggs. Feed, water, and a large supply of sand and ashes, are provided, and the sitting hen not allowed to leave the room until she takes her young brood with her.

The clutches are then "doubled up"—that is, two broods to one hen, and the chickenless one sent back to her coop to resume her egg laying. As soon as the young chicks are discarded by their mother they are taken to their future home, fifty in each lot, and the old ones back to their respective localities.

The fowls are fed three times per day, and their diet so arranged as to always present a variety, although oats is their staple article of food, and and always before them in unlimited quantity. To-day it will be Indian-meal, made into a stiff dough, and given hot; tomorrow, barley, next day, boiled potatoes mashed and mixed with pork scraps and bran—corn broken in a coarse mill, and so on in rotation; adding from time to time a dead horse, or some other cheap and inexpensive animal food. Burned bones, pounded shells and lime, are supplied in profusion. These, with what they gather on their foraging expeditions, produce a wonderful supply of eggs.

During the rainy season they are not allowed to leave the coop, except the day be exceedingly pleasant, and then only for a short time. They appear to bear their confinement remarkably well, and with hardly any decrease in the quantity of eggs. While confined they are allowed an extra allowance of animal food.

The attendants requisite to the care of these six

thousand fowls are one man and four boys. The houses are thoroughly cleaned once a week, and the interiors white-washed every three months. Every morning each lot of fowl undergoes a careful inspection, and any one found moping or otherwise indisposed is immediately taken to the hospital, and cared for; and seldom is it but what the indisposition is cured, and she takes her place back again as well as ever. At evening the boys go the rounds to gather up the proceeds of the day's labours, which will average two hundred dozen per day, the year through,

"Killing time" takes place twice during the year—in the spring and again at the commencement of the rainy season. All the early chickens are thus disposed of at a good price; and the two-year old fowl decapitated to give room for the younger broods, as they are supposed to be past profitable service after the second year.

The profits from one year's business amounted to eleven thousand dollars. The sales were seventy-two thousand dozen of eggs, and nearly twenty thousand chickens and two-year olds. Mr. San Fuentes expresses himself as being perfectly satisfied with the result obtained, and intends to double his stock every year, until every two hundred feet of his extensive farm has its house of fifty tenants.

#### BUY CATTLE TO FATTEN IN THE WINTER.

The liberal and constant application of manure is the grand basis upon which rests successful farming. Of manure there are three kinds—the so-called artificial manures, green manures, and animal or barn-yard dung. Each in its place is necessary to a proper enrichment of the soil, and the obtaining of all is a matter of much importance. Now, the heading of our present article leads us to a consideration of the manufacture of the latter manure. To make plenty of barn-yard manure a number of stock must be kept, and such should be richly fed; for as the fodder is rich, so will the manure be impregnated with a maximum amount of those rich elements which go to increase the growth of the plant.

While endeavouring to fat a great number of head of cattle, the question of a profitable return for the food supplied has to be considered as inseparably connected with the manufacture of rich manure. We have seen beasts put up to fatten who have eaten more than they have made. A thin beast, put up in the cold weather, takes a great amount of his food for the purpose of supplying the necessary heat to the body; while an animal in good order has a heat-producing store in his own fat, which allows all the extra food to be taken up in producing more meat. We may lay it down as an axiom that it will not pay to put up a thin beast to fatten upon stored or winter feed.

Pigs should be put up to finish off as soon as they have begun to exhaust the stubbles; and cattle should be stalled when by running upon fall pastures they have got themselves in good order, and before the cold weather has nipped down the grass.

Those farmers who have now a piece of low pasture would do well to go off into the higher sections to buy cattle. In these latter parts the pasturing is much burned up, and the cattle may be bought at a reasonable figure for cash.

Take such cattle and put them upon a low-lying piece of ground, and it is astonishing with what rapidity they will increase in weight. After August the fall pasturage will be ready for them; take them off this as soon as very cold nights set in, and stall feed. They will be the very best of beef by Christmas.

In this way alone, as a rule, can winter feeding of stock for the butcher be made profitable. The animal is growing from August to December without a day's check. We have bought steers in August for \$35 cash, and sold the same before Christmas for \$65, only stall feeding for about six weeks.

Money may be made in the current year by growing and selling a large breadth of grain, but it is made at the expense of our future income. Fattening of stock is the most profitable manner in which to apply our farm produce, for we have profit from the animals and manure to boot.

The greater portion of our produce should not be carried to town in the waggon, but should walk off the farm.

At the same time there is such a thing as putting more feed into a beast than his increase will pay for. If we adopt as an axiom that an animal should be always in good order before put up for stall feeding in winter, we cannot go far astray.

#### MANAGEMENT OF LAYING FOWLS IN SMALL RUN.

I am constantly hearing complaints respecting the almost total want of eggs and scarcity of chickens from fowls which the owners inform me are tended with every care, and fed in the best possible manner—the account concluding perhaps with such a statement as that "the fowls have a beautiful sunny run, upwards of twenty-five feet long and seven wide." The reply is always the same, namely, that want of natural fertility is one of the first effects of confinement. No food, no amount of attendance, can compensate for the fresh air and wholesome exercise fowls obtain when at large.

Look at a pen of fowls mewed up in a wire enclosure. There they stand, moping, dull, and inactive, knowing full well that it is of no use scratching in the hard soil, fetid with their own dung, which contaminates every morsel of food given to them, and in which a worm has not been seen for months.

On the other hand, observe a set of fowls at liberty. No matter how well fed they may be, they refuse to live exclusively on the corn and grain given by their owner, and pass their time, hour after hour, scratching for worms and insects, which constitute by far their most natural food, and they thus enjoy that healthy exercise which alone gives stamina and ensures fertility.

If persons want a succession of eggs in a run of limited extent, I know of but one mode by which it can be effected with certainty, and that is by continually getting rid of the old hens, and supplying their place with fresh-bought healthy young pullets. If I lived in a town and required a succession of eggs all the year round, I should relinquish the idea of keeping any particular breed. Every autumn I should purchase from a healthy country run as many early-hatched pullets as I required, preferably of non-incubating varieties—Spanish, Houdan, or Hamburgh; these would lay during the winter.—

In the spring, as the warm weather commenced, I would supply their places with a number of later-hatched chickens of last season, and these might be relied upon for laying during the summer and autumn, until they were exchanged for the supply for the second winter. This plan would not be an expensive one, whilst it would conduce to the health of the stock, and insure a good supply of eggs.

If the run were sufficiently large to allow it to be divided, and each part alternately dug up and planted with rape and grass seeds, it would be very advantageous; and, under all circumstances, the greatest cleanliness in the house and run, and an avoidance of overcrowding, would be found essential to success.—W. B. TEGETMEIER, in *Field*.

### CAUSE OF BEES ROBBING.

BY J. H. THOMAS, Brooklin, ONT.

The principal cause of bees robbing is want of forage. Bees will seldom, if ever rob when they can find plenty of flowers to work upon; but when flowers cannot be found, and the weather permits them to fly, their great anxiety to labor causes them to seek for honey even in the neighboring hives. Hence, in the spring and fall, or before the honey season commences, and after it closes, bees are much inclined to rob each other, and sometimes, for want of a little attention, cause the apiarian much trouble and loss. It frequently happens that a stock of bees, becoming overpowered by robbers, join in with them and assist in carrying away all their stores, and the bee-keeper very unexpectedly finds his hive minus bees and honey.

As a rule, however, stocks that are attacked by robbers are defective in some way: that is, if a stock is being robbed in "right good earnest" we may conclude that it is queenless or has a drone-laying queen or from some other cause is very weak. Robbers may, and not infrequently do attack strong stocks; in such instances they are generally handled rather roughly, and soon leave.

Every bee-keeper will have noticed in the fall, after the honey harvest is over, on the lighting boards of his hives, or some of them, a single bee surrounded by others. The bee surrounded is a strange bee, or robber; they hold it a prisoner; some are biting its legs, some its wings, while another is ready to take what honey it has—for by the continual biting of the bees it is forced to give it up. If the stock is queenless, or otherwise weak, these robbers increase until they will come and go in a perfect swarm, and sometimes in a few hours carry away all the honey in a hive.

To prevent robbing, the entrances to all hives should be contracted, as soon as the honey harvest ceases, to a very small opening, especially if stocks are weak. When it is discovered that a stock is being robbed, and contracting the entrance does not stop the robbing, it must be removed to a dark cellar or out-house for a day or two,—then bring it out and examine it and ascertain the cause, and apply the remedy. If queenless, or possessing only a drone-laying queen, give them another, or join them to another stock that has a queen. If not queenless, but very weak in bees, exchange places with some strong stock. If it is discovered that one stock in the apiary is robbing another, put the stock of the one that is being robbed in the place of the one that

is robbing; in other words, exchange places with the two stocks, and the robbing will generally cease. This should not be done, however, unless it is clear that the robbers are getting the advantage. But the best preventive of all is to keep strong stocks, and be sure they are not queenless.

### SALT THE STOCK.

We have lately observe many hoad of stock drooping, rough in the skin, and apparently suffering from some lost of appetite. We had thought that it was cntirely owing to the constant irritation from flies and the long continued dry weather. Upon questioning the owners, however, we generally find that periodical salting has been neglected; while our own cattle, which have received their regular weekly allowance of salt, appear sleek and healthy.

Salt is cheap, and is absolutely necessary for the welfare of man and beast. The excuse is usually "I was so busy at harvest that I forgot all about them." We have seen farmers who take the trouble to buy salt and top dress every load of hay that comes in the barn, and yet forget their poor dumb animals.

If the practice of salting is regularly attended to at stated periods, it is no very great trouble, and occupies but little time; while if only occasionally resorted to, it is very apt to be forgotten and neglected altogether. A still better plan, perhaps, is to place in situations accessible to all stock, lumps of rock salt. By this means all have an equal chance of appeasing the instinctive appetite according to the wants of the system, and will neither take the salt greedily so as to induce extreme thirst, and other inconvenience resulting from excess, nor suffer from the deprivation of an article of diet essential to health.

### WEIGHT AND VALUE OF LIVE-STOCK.

For the benefit of young beginners in agriculture, I make the following observations, says J. J. Mechi, the distinguished English agriculturist: If you are wrong in the buying, selling, and management of live stock, you may bid adieu to comfortable profits. How to buy and sell well are two axioms of the utmost importance to successful farming; therefore, if you cannot trust your own judgment, get if you can the unbiased opinion of some competent friend. It is worth even paying for if you have it not. But in the absence of both, let me commend to you the weighing machine, which will put you on a par with some of the best judges, and give you confidence in your selling, and improve you, if in buying you pay too dear. The weighing machine clears up many doubts. You should remember that in selling to the buyers (butchers or dealers) you have to do with practised hands, who, as a rule, thoroughly understand their business, and can judge closely of animal weight, so that the odds are sadly against you, unless you know the weight, and can therefore insist on a fair market price, which you are sure always to get, either from one or another. I have known of many a rare "picking" got out of farmers who do not know what proper price to ask. The usual computation for a well-fed but not over fat beast is, live to dead weight as 21 to 12, or 100 to

59 1-7th, with such modifications as suggest themselves by appearances.

### HIGHWAY CATTLE.

Cattle in the highway are beginning in many places to be regarded as they ought to be, with indignation. Even in some out-of-the-way points cattle running at large are prohibited. Railroads have done much in keeping the country roads clear of them since the courts have decided that the owners of such cattle are liable for all damages done to trains. A gentleman, from a neighbouring country, said to us the other day, "Why, I see all the gates along the highways are left open here, and many of them lead directly into beautiful lawns, flower-borders, &c. Are you never troubled with road-cattle?" We told him they were not allowed anywhere within the limits of the county of Philadelphia to run at large. He was much struck with the fact, and said he would get up a campaign in his own county against the very worst and most outrageous nuisance farmers had to contend against and thus far to submit to. "Why, sir," continued he, "the fear of the depredations of road cattle prevents farmers at certain periods from sleeping at night. They have actually to watch their crops all night, as these cattle are usually turned into the road again after being milked.—*Germantown Telegraph.*

**BUTTER MAKING.**—Mrs. N. J. Fisk, of Minnesota, sends to the *Agriculturist* the following short statement of her process of butter-making: "I first rinse the pans with cold water, then pour boiling water in them and let them scald about five minutes, then pour out the water and turn up the pans to dry. Let the milk stand twenty-four hours, and then skim and set the cream in a cool place—Churn every other day, and keep the churn sweet and clean. Never let sour milk stand in a wooden churn. Rinse the butter well, salt it, and stand it away until the next day, then work it well until no more brine can be got from it. Work fast, and you need not be afraid of its being oily." The directions are good for such short ones, but we would add: Always use your brains. Good butter cannot be made in a variable climate by any fixed rule. Sometimes milk should only stand twelve hours, and sometimes it will take thirty-six hours for the cream all to rise. If the salt is well worked in, four or five hours is as good as all night for the collection of the brine. In working the butter over the second time you may be fast or slow according to the temperature. In cool weather speed is of no advantage. "Wiping" or "sopping" the butter with a damp cloth is a good way to get the moisture out. Never let sour milk stand (unnecessarily) in any dairy vessel, and never let anything stand in a wooden churn—except sunshine and fresh air.

**FEEDING YOUNG CHICKENS**—One of my difficulties used to be the interference of the grown poultry with the food of the young chicks while feeding them. At last I hit upon this device, which may be of use to some others: I made a frame four feet square, three feet high at one end, four feet at the other; placed four roosting poles—old broom-handles—across it, and roofed it tight, leaving a small door in the centre of the roof. Then I made the

sides by nailing lath on them horizontally, just so far apart as would permit the entrance of the young chicks, but to the exclusion of chickens of a larger growth. We called the structure our "chicken boarding-house," and it answered to a charm. The little ones seemed to take to it naturally, and our Mary's tin basin and iron spoon beating a tattoo, brought the little vagrants home in spite of an erratic mother's clucking protests. They particularly patronized the roosting rods in the heat of the day.

Dr. Randall, in the *Practical Shepherd*, says;—"Lambs of all breeds should be weaned at about four months old; and if draught or other circumstances have occasioned a particular scarcity of pasturage for the lambs as their dams, and the former can put on good feed by separating them, it would be advisable to take off the lambs three, or even four weeks earlier. The somewhat prevalent idea that it is improper to wean them in "dog days," has not a particle of foundation. But whatever the period of weaning, sweet, tender pasturage is indispensable for them. New sowed stubbles and the rowen of meadows are usually reserved for them in this country.

### The Garden.

#### EXPERIENCE IN STRAWBERRY CULTIVATION.

Having been engaged in cultivating the strawberry for market for a few years, perhaps my experience might be of benefit to some of your readers.

In the spring of 1863, about the first of May, I set one acre of strawberries—forty rows of Wilson, and thirty of Agriculturist: rows three feet apart, eighteen inches in the row. The plants all lived did not lose one in a thousand. As soon as the blossoms appeared, they were all clipped off except two rows, which were left for experiment. The plants in these two rows nearly all died before fall, and the survivors were not more than half the size of those from which the blossoms were cut. The runners were watched and kept cut, and the plants grew very large, so that the leaves touched each other from different hills. The cultivation was mostly done with a common corn-cultivator, with the occasional use of a half mould-board plough, and the hand-hoe around the hill. No weeds were allowed to go to seed; in fact, as soon as the weed could be seen, the cultivator was started. This I consider the secret of success. About the first of December, the field was covered with buckwheat straw. The next spring the straw was parted over each plant, and allowed to remain until after the picking, when it was removed, and the ground cultivated again. The quantity of berries picked was about five thousand quarts—sold at an average of fifteen cents a quart. If the patch had been all Wilsons, there would have been at least a thousand quarts more.

In the year 1869, about the 20th of August, I set an additional half acre of strawberries, mostly Wilsons, in rows three feet apart, and plants one foot in the row. All lived and grew well for a month or two, when the grubs began to destroy them. As soon as this was discovered, boys were sent into the patch every few days with garden trowels to dig up every plant affected, and kill the worms. With

the next damp weather, other plants were set to fill the rows. Cultivation same as last year, except the runners were not trimmed quite as closely, and the earth was drawn more to the plants, occasioned by the plants being too close in the row, not being convenient to pass the hoe between to level down.

The plants were covered with straw in December, same as last year. In the spring, about the first of May, the straw was removed, the patch cultivated, the straw replaced around the plants. This was labor lost, as the patch did not yield as well as the old ones, which was not disturbed. The two patches, containing one and one-half acres yielded, this year, 6,700 quarts sold at an average of fifteen cents per quart.

From my experience, feel confident that seven thousand quarts may be raised on an acre of ground although half that quantity is more than the average crop. I consider hill culture decidedly the best, producing as much fruit, and better quality, at less cost.—*H me, Farm and Orchard.*

#### NEW AND OLD ROSES UNDER TRIAL

Lately I gave a list of roses under trial. Some have not given satisfaction, but I will only speak of success.

The following I can highly recommend:—1, Perfection de Lyon (Ducher); 2, Madame Chirard (unknown); 3, Edward Morren (Granger); 4, The Duke of Edinburgh (Messrs. Paul); 5, Marquis de Mortemart, (Liabaud). The first three are first-rate in every respect. 1 is the finest rose I have seen for many years; 2 is quite fit to go with it; 3 is magnificent, and a great improvement on Jules Margottin; 4 is of most lovely colour; 5 is not surpassed in delicacy of colour. Its growth, however, is only moderate. 4 is a free grower, but the first three are strong growers, and will long stay in a good catalogue. These are all I can speak of at present.

There are some old roses that deserve a word of praise—Madame Guinoisseau, pale rose; Triomphe de Caen, a velvety crimson purple; General Jacqueminot; Madame Emile Boyau, variable flesh, but often marked like beautiful Madeline. They are moderate growers, abundant and free bloomers, and, admirable for hedders. The last two have been overlooked by the "fast coaches." They are beautiful roses.

A few words about Souvenir de Poiteau. The blooms of the true sort are very even and smooth in aspect, the colour is a salmon-rose. I have two plants under this name from another firm, but they are Marie Cirodde, and their blooms are as rough as those described by Mr. Pochin. I cut down twelve plants of Marie Cirodde, a fine grower, on account of its rough aspect, and budded them with the Duke of Edinburgh, which, though very beautiful, has as yet been hardly full enough. Eleven plants survived the winter, and are blooming nicely.

The roses are wonderfully fine here, and abundant. Over one thousand people have visited the gardens since Whit-Tuesday. I allow rich and poor to come when they like.

I have overlooked a most beautiful white Bourbon Margaret Bonnet; it is a good grower, has fine foliage, and wins ladies' hearts.—*W. F. RADCLIFFE, in Cottage Gardener.*

#### ARSENIC FOR THE CANKER WORM AND OTHER LEAF-EATING INSECTS.

In the March number of the *Pomologist* appeared a valuable article on the canker worm. As a preventive of this orchard pest, the information there given is all sufficient; but as this pest is constantly spreading, and making its appearance annually in new localities, no doubt many of your readers will, in the month of May, find it for the first time upon their trees, while many others, familiar with it in years past, will have neglected to use the proper preventive early in the season. For the benefit of such I will give my experience in ridding my trees of the worms.

Some years ago my orchard was nearly destroyed by this worm before I could learn how to protect my trees from its depredations. I at last used the bandage and tar process with perfect success; but in the spring of 1868, in the hurry of other business, I omitted it. The consequence was, my trees soon after putting out were alive with worms. It occurred to me that an application of hellebore or some other poisonous substance thrown over the trees in a liquid form, might check, if not destroy them. I made the experiment on a small scale with hellebore, arsenic and strychnine. A half pound of arsenic and a bottle of strychnine were dissolved in about four gallons of water, in separate vessels, and each applied to ten large trees. I also used two pounds of the crushed hellebore in the same way. In a few days the trees to which the arsenic and the hellebore were applied were entirely clear of worms, and putting out new foliage; but the strychnine had no visible effect. As the hellebore and arsenic seemed to be equal in effect, and the former costing fifty cents per pound, and the latter but twenty cents, I determined to dispense with the hellebore on the score of cheapness. And now for my operations on a larger scale.

Take a large iron kettle, holding twenty gallons or more, hang it on a pole in the orchard; to twenty gallons of water add a half pound of arsenic, build a fire under it stir the water, and by the time it comes to boiling heat the arsenic is dissolved; empty into barrels, or a large cask, and add thirty gallons of clear water to each twenty.

I used a hand force pump or garden engine to sprinkle the trees, the nozzle of which I hammered flat-wise, so as to cause the water to issue a fine spray. I screwed the pump to the bottom of a kerosene barrel, and so fixed the handle as to work it like a common pump, the handle resting on the side of the barrel for a fulcrum. This was placed in a two-horse wagon, filled with the arsenic water, and a close fitting lid or cover put on to prevent slopping out. With hose in hand, a steady team and driver, and a man at the pump, I moved slowly along on one side of a row of trees, and then turned on the other side, wetting the trees thoroughly. I found that one application did the work, for every worm was on the sick list within two hours. Within two days I found it difficult to find a single live worm. One gallon of the arsenic water is sufficient for a tree fifteen inches through the top, if properly applied.

It is necessary to be careful about inhaling the steam of the arsenic water when preparing it. Care should also be taken not to get wet with the poisonous water. Have the hose of the pump long enough to reach above the head. The best time to

operate is when the largest worms are about two-thirds of an inch in length. At that stage of growth the worms are nearly, if not quite, all hatched out.

I believe that arsenic water prepared in the way I have used it, can be used successfully in destroying all leaf-eating insects, for with one single application to my orchard the canker worm was most effectually exterminated.—*Western Pomologist.*

#### ECONOMICAL GARDENING FOR WOMEN— AN EXAMPLE.

We have been for some years acquainted with a young lady who is now successfully working her way in business and who has proved the advantages of gardening for profit by her own practical experience. The profit in money was moderate; in the re-establishment of impaired health, it was great. Possessing but little means in the first place, she obtained a thorough academic education by borrowed money. This she refunded by teaching, and she continued teaching for some years afterwards. But the confinement and mental wear impaired her health, and she resolved to restore it by a regular system of out-door exercise. She resided seven miles from a village of moderate size, and fourteen miles from a city of fifteen thousand inhabitants—both rather inconveniently distant for common marketing. She, however, rented about half an acre of ground for which she was to pay ten dollars annually, with the privilege of retaining it two or three years longer. The first thing was to under-drain it by cutting two ditches lengthwise through it, at a cost of fourteen dollars, half the expense of which was paid by the owner. It was clover sod, and was ploughed in autumn. She commenced labor early the following spring, by first eradicating the perennial rooted weeds and clearing off the small stones. She worked moderately at first—this was gradually increased until five hours' labor could be performed. The amount of her in-door labor was not great.

Common vegetables were too heavy and bulky for so remote a market, and sage, radishes, saffron and carrots were chosen as the crops—the carrots being sold to persons who had small lots, and who would come to buy them for their cows, at a reduced price. Berries were not chosen, as they had become common, and it would be difficult to market them.

The ground was first thoroughly harrowed—one-half assigned to carrots, a square rod to radishes, four rods to saffron, and the remainder to sage. The carrot seed was drilled in by a hand-machine hired of a neighbor. The sage seed, one pound, costing three dollars, was put in with a marker, in rows twenty inches apart. The radishes, as usual, with successive sowings. The first were sown a month too late for profit, and the winter radishes would not sell. All the crops came in nice succession for continuous work. A few days of hired work at the right time, kept the weeds under.

The labor was moderate, and proved a delightful change from the severe mental fagging of school teaching. She remarked that she never dreaded the Monday morning as formerly. She amused herself by estimating her future profits, which, as may be supposed, were somewhat greater than they actually proved. She did not allow damp weather to interfere with regular work, but only severe rain;

dispensed with gloves, and gradually became strong. She could read and study with more zest than for years.

Her radishes were sold at the groceries of the village. The saffron was picked between the season of cultivating and the gathering of the sage. The carrots were dug by hired labor. The following is the account of expenses and profits:—

Expenses of rent, seed, labor, &c.....	\$31.63
Returns—200 lbs sage, 40c.....	\$80.00
169 bu. carrots, 30c.....	49.60
Radishes.....	6.85
3½ lbs saffron, 90c.—1½ lbs, \$1.....	4.65
Grapes (old vine, pr'd & imp'd).....	3.00
	—144.10
Net.....	\$109.47

This was certainly fair success for the first year; had she tried another year, several improvements could have been made. The soil was obviously not very rich, as 320 bushels of carrots per acre, for rows only sixteen inches apart, is rather small. Her health had previously been so nearly ruined that she was not able to resume teaching the following winter, although a great improvement had been effected, resulting eventually in entire restoration.—*Country Gentleman.*

#### EARLY RIVERS CHERRY.

It is now many years since the Early Purple Guigne Cherry was distributed by the Horticultural Society among its Fellows. I have had it more than twenty years, and always noticed with interest its earliness and excellence; but its delicate habit, it being liable to canker and gum, prevented its extensive cultivation. It is but a few years since it occurred to me to improve it by raising seedlings from it, and then again I found difficulty in procuring fruit thoroughly ripe, for the stones from unripe fruit would not vegetate. This is a common thing with early fruits; the pulpy covering ripens, but not the seeds. At last the orchard house came to my aid, and in the hot summer of 1865 some stones from very fine ripe fruit were sown. In 1866 they made plants from 1 to 2 feet high. In that summer their tops were cut off, and their buds placed in some Mahaleb stocks. In 1867 they made a fine growth of some 4 to 3 feet. In the autumn of the same year they were potted; in 1868, in the orchard house, they formed blossom buds; in 1869, Early Rivers bore its first crop; in 1870 and 1871 the tree bore abundantly, and its fruit were as large as those of its parent, a trifle later, but very rich and good, and the tree luxuriant and healthy.

There are other seedling trees of the same race; all have given fine fruit, and one of them is remarkable for its earliness. Early Rivers in 1870 ripened with its parent; in 1871 it was three or four days later.—*Thos. Rivers*

[This very excellent cherry has been very appropriately named. It possesses merits of a high order, and, we feel satisfied, will become one of our most popular varieties. The fruit is produced in large clusters of ten to twelve, two to four on a very short common peduncle. Fruit 9-10ths of an inch in diameter, roundish heart-shaped, and somewhat uneven and "hammered" on the surface, slighted pitted on the apex, and with a distinct style point; suture not well defined. Skin black. Stalk 1½ inch long, rather slender, green, with a small, rather deeply embedded disk. Flesh very tender, sweet,

and agreeably flavored. Stone extremely small perhaps the smallest in any cherry.—*Cottage Gardener.*

### GOOSEBERRY MILDEW.

*To the Secretary of the Fruit Growers' Association of Ontario:*

Sr.,—At the last meeting of our Association, held at Hamilton, I was requested to give some explanation of gooseberry mildew. I had not given the subject those close microscopical observation which I have since done. These are quite at your service in case you feel disposed to include them in your annual report; they are as follows:—

I have frequently been defeated in securing a crop of gooseberries of the foreign sorts free from fungus. These frequent failures, and the request before mentioned, determined me to proceed to a more searching study of the phenomena connected with its last development; therefore, on the 5th day of July last, I placed minute pieces of the fungus (taken from a berry just plucked) on the field of a powerful microscope, commencing at its lowest diameter, and from thence gradually increasing its power. I found this fungus to be composed of a well organized cryptogamus plant, exhibiting a vegetable growth many degrees lower in the organic scale than the berry from which it derived its supply of food. It consisted of a dense net work of filamentous texture, interwoven in every conceivable way; along these filaments of threads were disposed vast numbers of minute seed vessels or conceptacles, each containing from 4 to 8 sporangia, within which lay numerous germs. Now, these conceptacles were constantly maturing, bursting open and sending forth germ life to the air in vast numbers invisible to the naked eye, possessing the power to increase to a marvellous extent, and in a very short space of time. It is quite credible that in this way it might soon form an environment in which the surface of every berry and leaf would become bathed, for by the slightest motion of the air these germs are wafted. When we consider them capable of sustaining vitality under extreme heat or cold (for this has been verified by the experiments of both German and English scientists in their recent experiments to test spontaneous generation), it would almost appear from this to be a law that the more elementary the organic structure the more difficult it becomes to destroy its vital properties under extreme conditions.

Now, our gooseberry cryptogam increase its size and form by extension of cilia on extremely fine threads, branching, overlapping, and reaching in in all directions, where food is most abundant and suitable, not unlike the spread of mushroom spawn, so that in fact the depth of net-work or the density of disease, but acts as a mere scavenger in the removal of matter unsuitable for the development of higher organic forms. I can only lay hold of refuse matter. I consider fungi as important in the economy of nature as the higher organic forms, and I would not willingly be guilty of charging those simple structures with the crime of creating disease on the more complex organism any more than I would the crow for the death of the horse upon which he feeds.

Mr. J. N. Jones, of Charleston, ten years ago observed that before a "fungus made its appearance, and before any trace of it could be observed under a high magnifying power, the surface put on a peculiar glazed appearance." Now, this in the case of the gooseberry, arises from its own exudation becoming condensed upon the surface. Fruits, like leaves, undergo continual evaporation. If from any cause this exuded gooseberry vapour which contains the elements of sugar, becomes condensed at the surface, it forms into a glaze (constituting the essential food,) which soon becomes, when exposed to the action of sunlight and air, chemically decomposed; the thickness of the glaze will depend upon the quantity of vapour and period of condensation I have observed that when mildew makes its appearance, both fruit and leaf often appear affected, condensation taking place when the air becomes suddenly raised in temperature; all cold bodies which it surrounds are at once converted into condensers in the same way as a tumbler of ice-water will condense aqueous vapour held in the air, and deposit it upon its outer surface on a hot day. The operation of this same law would cause the berry (all other things being favourable) to be covered by its excretions, which deposit would differ in point of quality, essence, and chemical composition, from ordinary air condensation, and also to an appreciable extent in one variety of gooseberry from another.

I cannot now dwell on any further explanation of this, but must proceed to explain the further appearance of things under the microscope. Upon submitting a small section of tissues of the inside of the skin of the berry, I also observed it to contain a net-work of filaments, with their conceptacles attached, same as that which overlay the berry; but no doubt the juices of the skin of the berry had by this time become involved in the chemical change. I am therefore satisfied that fungus does in no manner act as a parasite; but that its sporules do nothing more than seize upon and take advantage of the most favourable conditions presented to them, feeding upon such excrementitious matters wholly unfit to supply the requirements of the fruit.

Frequent syringing of the leaves and fruit at critical changes of atmospheric temperature, with warm water, might possibly remove the food of the fungus, or make it unsuitable. It is a mere suggestion, worth a trial however.

W. H. MILLS

### THE BLACKBERRY.

There is probably no species of small fruit that has been so greatly overlooked in regard to cultivation as the blackberry, and yet there is no fruit that promises to be so profitable. A number of varieties that have originated about the Eastern markets speaks in the plainest terms of the neglect in blackberry culture, while the markets of Pennsylvania and New York are well supplied from their own States and New Jersey. While I have no doubt that culturists here can make it as profitable as in other States, yet I am aware that an increase of popularity can only be reached by an increase of its cultivation; the history of the strawberry goes to prove this; for instance, while the strawberry was sparingly cultivated, the prices were much less



than at the present time; and even at present the blackberry in the East is far below the markets in Philadelphia, which goes to show that high prices are retainable only by extensive cultivation.

I have tried faithfully all varieties of blackberry of American origin except the Sable Queen, and have come to the conclusion if one would grow for market he had better get the Wilson and conclude that he has got variety enough, or if he thinks best he can do as I have done, get the Lawton, Dorchester and Kittatinny, and then Wilson; there is one thing certain, if one gets the Lawton into his land, he will always have plants to sell; there remains not a shadow of doubt but that the Wilson blackberry is the berry.

The people of New Jersey and Pennsylvania are plowing up their strawberry beds, and setting out Wilson's blackberry and the Philadelphia raspberry, and are realizing from \$600 to \$1,000 per acre for their fruit, and at no distant day something like that realization will be brought about here in New England; for I have no doubt but our old worn-out pastures can be made to yield from 1,500 to 2,000 boxes per acre, by the use of muck, and this for a number of years. The Wilson blackberry needs a light, sandy soil or loam. There are several advantages that the Wilson blackberry holds over other varieties: it is extremely large and earlier than any other variety; and best of all it does not spread, but is closely confined to hills; this is of the greatest importance in their cultivation; this one thing condemns the Lawton and Kittatinny for field culture; the Wilson will yield five boxes to two of any other kind; all fruit growers tell the same story, unless they have a lot of other plants to get rid of, as is sometimes the case. In this they would have a hard lesson if all were of my mind; they better take New Jersey for an example and plough them under.

The blackberry requires to be set about five feet each way; I sow them both ways, so one can hoe them with a horse and save much labor; this is sufficient unless the land be very grassy; keep them well hoed before the fruit sets; and after picking the berries about the first of July, if your new canes have attained about their proper height, cut them back to about two and a half feet of the ground; they will then throw out branches below and harden up for the Winter; should cut them as soon as July 1st; then in the Fall or Spring cut all old and weak wood, with shears for that purpose. There is nothing pays so well for clean culture as the blackberry and raspberry. I used muck or vegetable manure in the hills,—use freely, as the plants are to stand a number of years; and people have been greatly in fault if their only object in hoeing is to kill the weeds; for I believe that an occasional stirring of the soil is essential to the health and growth of all plants; this is my experience with blackberries and raspberries, and when one can produce me a better blackberry than the Wilson, or raspberry than the Philadelphia, he will have gained a name that will be immortalized in history and which will be handed down to unborn generations.—*Cor. Boston Cultivator.*

#### GARDEN SEEDS.

FARMERS are sometimes apt to be dependent on the salesman for their yearly supply of garden seed;

whereas a little forethought and attention at the proper season, would not only save them annually the sums expended in purchasing seed from the store, but would ensure the required article of the proper age and quality, and would also give better opportunity of making improvements in the different varieties. To do this, however, care and judgement are necessary. It will not answer to adopt the principle of setting aside the last-ripe, or the smallest products of either garden or field, for the next year's sowing. Potatoes to small for use are unfit for planting, and late ripened seeds of any kind will probably yield a late maturing plant the next season. Let the farmer make his selection from known varieties, the qualities of which he has tested. Let him set aside early in the season a single plant or two of promising appearance, for the special object of growing to seed, and bestow on these plants special attention. He will thus secure germs that will probably yield more luxuriant growth and better quality in the succeeding product. He will certainly save himself the disappointment of obtaining old seeds instead of new, or different variety from that which he expected. Having secured his seed, he must of course be careful to place it in security from damp and the depredations of mice, and must not omit to label each parcel with the correct name, and the date of the contents. These are simple matters, scarce calling for notice, yet in how many instances does failure come from inattention to them. We know not a few who make a point of saving seed in the fall, and yet have invariably to purchase their supply in spring. Mice, or damp or want of care in labelling, or some other equally trifling cause, have defeated all their pains.

#### GATHERING FRUIT.

The appearance and the value of fruit depend very much upon when and how it is gathered. Strawberries, if picked carefully, with half or quarter of an inch of stem attached to each berry, and laid carefully in the basket, will carry better, and sell for a greater price, than when pulled hap-hazard, some with hulls and stems on, and some with them off. Again, if they are gathered when they are perfectly dry, they will keep longer and retain a better flavor than if gathered while wet. A little water not only hastens decay, but it rapidly destroys the flavor of many delicate soft varieties. After being gathered, they should never be allowed to stand out exposed to the sun, as with many varieties, it takes but a little while of exposure to a hot, clear sun, to destroy their brightness of color.

Peaches should be left on the tree until they are fully ripe, and then gathered carefully with thumb and finger, and at once laid in the basket or box in which they are to be marketed. If the bloom is rubbed off the peach by rough handling, its beauty of appearance is injured, and it will decay much sooner than if untouched. Formerly it was supposed that the peach must be gathered before being fully ripe, in order to ship it any distance, but practical experience has proved that ripe fruit, not quite soft, will carry quite as well as unripe, and command a much better price.

Pears and apples should never be picked from the tree by breaking the stems. Unless the stem will separate freely from the tree, the fruit is not ripe;

it will neither eat nor cook well and is only fit for those who want a touch of the cholera morbus — Apples, as gathered, may be sent directly to market, but nearly every variety of pear is improved in appearance and quality by keeping in close dark drawers, wrapped in flannel or soft paper, or packed in bran for a few days.

For profit, and in order to obtain the highest price, all fruit pays to be assorted into two or more grades. A few scattering large berries, apples, or pears in a quart or bushel, do not assist in advancing the price; but if carefully packed by themselves will bring the highest price, and often induce the dealer to buy the small fruit in order to get the large.—*Ho. ti. u. rist.*

#### RASPBERRIES IN CINCINNATI MARKET.

Mr. Ritz says of the merits of red and black Raspberries as a market fruit:—"The yield of Black Caps was large, and prices ruled low; to low, in fact to pay for raising them. If some of our fruit growers would plant more of the red and less of the black varieties, they would find it more profitable. Black caps have been selling during the season from \$1 to \$5 per bushel, not averaging, in many cases, more than \$2 to the grower, while the Antwerp has ranged from \$8 to \$16, and have been scarce at these prices. During the last ten years red raspberries never sold for less than from \$5 to \$6, most higher, and always averaging at least \$6 during the season. The purple cane family, however, including the Philadelphia, does not sell much, if any better, than the Black Caps."

#### GARDEN GLEANINGS.

A Baltimore correspondent of the *Country Gentleman* protects his grape vines from mice by washing them from the eye down to the roots with suds of carbolic soap, "pouring a little down among the roots." He says it does not hurt the vines.

The Delaware grape originated in Delaware Co., Ohio. Benjamin Heath, a farmer living in the west part of the county, on the Scioto river, owned the vine from which were propagated, within the last twenty-five years, all the grapes of this variety in the United States! How wonderfully rapid has been the dissemination of this choice fruit.

W. S. L. Goodale, of Saco, Maine, an eminent pomologist, says that he has sixty varieties of hardy grapes under cultivation, a large number of which he rejects as unsuitable for general cultivation. Among those retained is the Clinton of which he says:—"The Clinton is hardy, productive and good; colors early. When allowed to hang late its harsh flavor turns to vinous and rich."

—After considerable croaking about the falling off of fruit, it turns out that the peach crop in the St. Joseph, Mich., region will be above an average one. It is estimated that there will be 350,000 bushels, of very fair quality. There is great abundance also of other fruits. The trees are loaded down with plums. Pears are in large, though not profuse supply. Blackberries should be in their prime just now, but are largely a failure, owing to the very dry weather. Grapes will be a heavy and choice crop.

The sweet violet are among the most charming little gems of the spring garden, and they will grow almost anywhere, provided they get pure air; but what they most delight in is a rich, deep, loam soil, with liberal soaking of manure water during the flowering season. The following are a few of the most distinct: King of Violets - Dark violet, a good grower, free bloomer, and fit for greenhouse or out-door culture. The Giant and the Czar—if not the same, are very much alike; both have large flowers, with long stalks, which make them very valuable for their bouquets or vases. Devonianensis—In bloom the whole season, and has a long flowery stalk, which makes it valuable for gathering; it is of a light violet color. Neapolitan—One of the most beautiful, second to none, remarkably sweet-scented, with charming pale-blue flowers. These are all worthy of general cultivation.

THE TOMATO AS FOOD.—A good medical authority ascribes to the tomato the following very important medical qualities.—1st. That the tomato is one of the most powerful aperients of the liver and other organs; where calomel is indicated, it is one of the most effective and the least harmful medical agents known to the profession. 2nd. That a chemical extract will be obtained from it that will supersede the use of calomel in the cure of disease. 3rd. That he has successfully treated diarrhœa with this article of diet, it is almost sovereign for dyspepsia and indigestion. 5th. That it should be constantly used for daily food. Either cooked or raw, or in the form of catsup, it is the most healthy article now in use.

#### Editorial.

#### THE COMING PROVINCIAL EXHIBITION.

The twenty-sixth annual Exhibition of the Agricultural and Arts Association of Ontario is to be held this year at Kingston, during the last week of the present month.

For various reasons the locality of the Exhibition this year is not favorable for the largest attendance and the greatest success of this important institution.

Heretofore, pecuniary loss to the Association has invariably resulted from the fair being held in Kingston, and though it has been felt that justice to all parts of the province required that the eastern city should have its turn, the fact of its having been a losing affair, has always more or less diminished the interest of the occasion. This year, there is most unfortunately about to the usual difficulties that beset a Kingston Provincial Exhibition, a conflict between it and the Western Fair, which comes off during the same week in London. It is just possible that the rousing up of the local determination and zeal may have the effect of rendering both successful, for there is always a large surplusage of articles and attendants left at home, that might advantageously be at these Exhibitions. We have known a religious congregation split into

two, and each half build a better church an: form into a more prosperous interest than the entire body would have done had it remained in tact; and seeing that the holding of these two Exhibitions at the same time appears to be unavoidable, we hope that all concerned will do their best to make both a success.

Up to the date of this writing, (September 12th) we are glad to find that so far as the entries are concerned, the forth coming Kingston fair is ahead of its predecessors, and even in advance of the Toronto Exhibition last year. So far the total number of entries in the classes thus far exported for 1871 is 2,607. The Exhibition was last held in Kingston in 1867, when the total entries in these classes were 1,820, last year in Toronto the whole number of entries in the same classes was 2,331. The *Globe* of yesterday gives these entries in detail specifying the several classes, and comes to the general conclusion that there is increase in the number of entries this year in cattle, sheep, pigs and poultry, while in horses and implements there is a slight falling off. The entries are, however not all in yet, while many that are in are not arranged under their respective headings. It will be a most encouraging circumstance, if at length, in this year of grace 1871, a Provincial Exhibition in Kingston should pay its way, and make both ends meet.

The week's programme for the exhibition is as follows:

MONDAY, September 25, will be devoted to the final receiving of articles for exhibition, and their proper arrangement. Officers and members of the Association, judges, exhibitors, delegates, members of the press, and necessary attendants, will be admitted on presenting the proper credentials, badge, or ticket of admission. Other persons will be admitted on payment of 25 cents each time. The rules for admission will be the same throughout the exhibition.

TUESDAY, 26th.—The judges in all the classes will meet in their respective Committee Rooms at 10 a. m. and will make arrangements to commence their duties. On receiving the class books, they will be also furnished with the blank prize tickets, which they shall fill up and affix in each section so soon as they shall have finally determined their awards. The First Prize Tickets will be Red; Second, Blue; the Third, Yellow; the Fourth, White; Extra, Green; the "Highly commended" and "Commended" Tickets, White. On completing the class, the judges will report to the Secretary. The main exhibition building will be closed all this day for the purpose of affording the judges an opportunity for discharging their duties properly. Non-members admitted to the grounds on payment of 25 cents each time. The Annual Meeting of the Fruit Growers' Association will take place at 7 p. m.

WEDNESDAY, 27th.—The judges of the various classes will complete their awards as early in the day as possible. All the buildings and grounds will be open to visitors. Admission the same as on Monday and Tuesday. The annual meeting of the

Mechanics' institute Association will take place this evening at 7 o'clock.

THURSDAY, 28th.—Admission 25 cents. The Prize animals will be exhibited in the ring at 2 p. m. The annual meeting of the Directors of the Provincial Agricultural Association, for the purpose of electing auditors, deciding upon the place of holding the next Exhibition, and other business, will take place at 7 p. m., at the Ontario Hall, City Buildings, Kingston.

The President will deliver his addresses at the annual meeting.

FRIDAY, 29th.—Admission the same as on previous days, till 2 p. m. At 2 p. m. the Exhibition will be considered officially closed, after which no one will be admitted into the Crystal Palace, and exhibitors may commence to take away their property.

SATURDAY, 30th.—The Treasurer will commence paying the premiums at 9 a. m. Exhibitors will remove all their property from the grounds and buildings. The gates will be kept close as long as necessary, and none will be admitted except those who can show that they have business to attend to.

### GOOD FARMING AND HIGH FARMING.

A recent number of *Hearth and Home* contains the following discussion of the question. "What is high farming?"

Almost any intelligent farmer could give a tolerable correct definition what is meant by the term *high feeding*, as applied to farm animals, but we have never seen a rational definition of the term "high farming." High feeding is furnishing an animal all the food it can eat, digest and assimilate. This being done, the rapidity of growth would be determined by the breed, constitution, and disposition of the animal, and by the care, kindness, regularity, and judgment of the feeder. Leaving out of consideration such appliances as hot-beds and other contrivances of the gardener and fruit-grower for lengthening the season and stimulating the growth of plants, and confining our attention to ordinary farm crops, such as wheat, barley, oats, Indian corn, grass, potatoes, and roots, high farming means, first, putting the soil in the very best mechanical condition, and then furnishing it with all the available food that the plants require to enable them to produce maximum crops. It is furnishing sufficient food to enable the grass, (for instance) to start at the earliest moment in the spring, to enable it to keep growing to its utmost capacity all through the spring, summer and autumn, and, as far as possible, into the winter. In the case of cultivated plants, it is furnishing sufficient food to enable the soil to grow as much produce as the "season" is capable of organizing into food, without any rest or let-up. In other words, high farming is doing every thing in our power to enable the soil to produce maximum crops every year, or twice a year, and more frequently, if possible. There is a limit to its productivity, but this limit is determined by elements over which we have little or no control. The sun is the great source of power in vegetable growth, and, as compared with those of England, American farmers are particularly favored in this respect. We have a remarkably bright and powerful sun. Our market-

gardeners sometimes "live up to their privileges" in this respect; farmers rarely ever do. The sun is capable of organizing larger crops than the available food in the soil can support; and it is the object of high farming to bring the soil up to this point, and to keep it up to this point all the time. Good farming aims to raise just as large crops of wheat, barley, oats, corn, potatoes, grass, and roots, as high farming, but it does not necessarily aim to produce them every year. It takes more time. It adopts a longer rotation. It often resorts to a summer-fallow. It introduces clover more frequently into the rotations, and perhaps allows it to stand a year or two longer. It sometimes plows under a crop of clover, or peas, or mustard, or buckwheat, for manure. High farming never does. High farming never summer-fallows. It never lets the land lie idle, or suffers any of the forces of agriculture to lie dormant or run to waste. High farming is fast farming; good farming is sometimes slow farming. Both raise large crops, but one raises them more frequently than the other. As to which is more profitable depends in a good degree on the price of land. In Mr. Law's experimental wheatfield, that has grown wheat every year for twenty-seven years, some of the plots, are furnished with all the fertilizing material that the sun is capable of organizing into food. Sometimes as much as 55 bushels of wheat per acre are produced on the best plots, while there would be less than 20 bushels where no manure was applied. Here then, we have in the same field, a good specimen so far as wheat is concerned, of high farming on the one hand, and low farming on the other. The yield of the one plot is determined by the sun and the length of the growing season, while the yield of the other is determined by the the amount of plant food rendered available each year by the action of tillage and the decomposing influence of the air, heat, rain, etc. We call the latter low farming. But it is not good farming. The seed and labor cost nearly or quite as much as if the yield was 45 bushels per acre instead of 15 bushels. No matter what the price of land is, such farming is not by any means good farming. But husband the plant-food that annually becomes available for three or four years, and then we have enough available plant food in the soil to produce from 40 to 60 bushels of wheat per acre, or probably as much as the sum and season are capable of organizing. This would be good farming, but it is not high farming.

How to accomplish this object we have not space to discuss. It is done by summer-fallowing, by growing clover, peas, beans, roots, &c., and by plowing them under, or by consuming them by animals and re-turning the manure."

We are not sure that the illustrations employed in the above article will carry conviction to the minds of farmers in general, so as to induce a better system of husbandry, in as much as they have a prejudice against *high feeding*. It is associated in their minds with pampered cattle that have swept the prize lists at fairs by force of flesh and fat, been sold at extravagant prices, and found worthless for breeding purposes when taken home by their purchasers. But certain it is, that the opposite system is a truthful illustration of the common style of farming. For the most part, land is kept in a half

starved condition. It is like a team that does not get enough to eat. Such a team will do some work, faithfully and without energy. How many fields there are that look just like such an ill-kept half fed team. It is but too evident that they do not get enough to eat. "Feed your land and it will feed you" is one of the best agricultural maxims to live by, that we know of. It is possible to over-feed land, but this is one extreme into which at present there is little danger of our farmers falling. The starvation policy is the one that is in vague, and the sooner it is abandoned for a more generous and common sense line of things, the better will it be for the profit, and we may add, the satisfaction of farming. For there is just about as little pleasure in working a half-fed farm, than there is in working a half-fed team.

#### THE CLASHING EXHIBITIONS.

It is very unfortunate that the Provincial and Western Fairs are this year to be held on the same days. From the initiation of the Western Fair there has been an idea in some quarters that it was meant as a rival to the Provincial Fair, and the clashing which takes place this year, gives a colour to this idea which it will be very difficult to remove. For ourselves and many more who wish well to the London Exhibition, and would like to be present at it as well at the Provincial, it is peculiarly unfortunate since it is not possible to be at both. We must do the London people, the justice of stating that they have one and all invariably disclaimed the design of antagonism or rivalry, so far as the Provincial Exhibition is concerned. And yet, in the absence of more full explanation, it does seem as though some understanding might have been come to so as to have taken different weeks. One or both must suffer more or less in consequence of the existing arrangement. We blame no one in particular, for we are not sufficiently informed to judge who is responsible, but surely there has been want of good management or want of good feeling on the part of one or the other of the Boards. We cheerfully insert part of a letter from the Secretary of the Western Fair explanatory and defensive of the action of the London people in regard to this matter.

LONDON 31st Augst, 1871.

Rev. W. F. CLARKE,  
Guelph.

Dear Sir:

I learn from a conversation held with Mr. E.W. Hyman to-day, that you are under the impression that in consequence of our Fair days being the same as those of the Provincial for this year that we are hostile to that Institution. Although this impression has got abroad to some extent it is altogether a mistake. The facts are these:—At the first

meeting of our Joint Board for this year, held on 26th January it was deemed advisable to fix the holding of our Fair. We were aware that Hamilton and Guelph intended hold similar Fairs. The surrounding Counties would also be arranging for the holding of their Fall Exhibitions. It therefore became a necessity for us to select our days, and we agreed upon the same week in the Month as that on which our previous Fairs had been held.

Mr. Shipley Vice-President of the Provincial Association, was present when the matter was discussed, and agreed that from the course hitherto pursued by the Association, the time named could not possibly conflict with them. I have not the date on which the Association fixed the time for the holding of their Exhibition, but it must have been nearly two months later. We reconsidered the matter, and found ourselves obliged to adhere to the original plan. I regret, as do all the Directors that there should be the least apparent conflict, as we would rather add to than detract from the good that may be done by the Provincial Association. If the time for holding the Provincial Exhibition could be fixed at the Annual Meeting any such seeming conflict need not occur. We in London will welcome the Provincial Exhibition when our time comes to have it here, and will gladly give them the support and assistance we have hitherto done.

Knowing your friendship and good will towards our local Exhibition, and wishing to retain the same,

I am Dear Sir

Yours truly,

WM. McBRIDE,  
Sec'y. W. F.

## Agricultural Intelligence.

The crops around Merrickville promises abundance, and farmers have not had such cheering prospects for many years.

There is said to be a most abundant harvest in Spain this year, much more so than there has been for some years past. The harvest is so good that it is calculated she will be able to export about fifty or sixty millions of dollars worth of grain.

An immense breadth of barley has been sown along the Bay of Quinte, and the Napanee Beaver says not less than 500,000 bushels will find cash buyers this season in that town.

The grape crop in Nissouri is said to be immense. Ripe clusters received by rail are now selling in St. Louis at three cents per pound, and the grapes brought in by vintners in the neighborhood sell for four and five cents, and retail at six and seven cents per pound, unusually low rates.

**THE ROYAL SHORTHORNS.**—At the sale of Her Majesty's Shorthorns, bred on the late Prince Consort's Shaw Farm, Windsor, 41 cows realized the sum of £1,358 14s., being an average of £33 2s. 9d. per head; and 14 bulls brought a total of £489 6s., or £34 19s. per head.

The post of U. S. Commissioners of Agriculture, vacant by the resignation of Hon. H. Capron, has been conferred upon Judge Watts of Pennsylvania, who has long taken an active interest in agriculture, and has held the office of President of the State and Agricultural societies. The appointment gives general satisfaction.

Mr. John Corrie, of Dereham, has just received direct from Stewart and Gloucester, England, three pigs, one boar, and two sows of the improved Berkshire breed, from the sow that took the prize at the Royal Agricultural Society—very fine specimens, 9 months old. He intends to exhibit at the Provincial Fair. This is the second importation he has made within the last 12 months.

The Kingston *News* says the wool season just closed has been one of the best for some years past, both in the additional amount of the clip, the greater proportion of superior quality produced, and the improved condition in which it has been brought into market. A cargo of 25,000 lbs. shipped to Oswego by a buyer last week, averaged an advance price of six cents per pound over that of last year.

**GOOD SEASON FOR MILK.**—From conversations with patrons and from accounts in papers in various parts of the North-west, it seems certain that the present season is an excellent one for dairymen as far as yield of milk is concerned. Grass started early in the spring, and the supply has been abundant. Not only has the amount of milk been very large per cow, but it produces proportionately more and better butter and cheese than is usual.

At the recent show of the Royal Agricultural Society, the number of visitors on the first day (admission 5 shillings) was 2,654; on the second (admission 2s 6d) 7,000; on the next, Wednesday, 11,514; on Thursday, the first shilling day, there were 52,466, and on Friday, 33,620. The total proceedings amounted to over £15,000; notwithstanding which, the society sustained a loss by the exhibition of £1,500.

The Richmond Hill *Herald* has had several visits from neighboring farmers who have had the thrashing machine at work in order to make room for other crops. One of them reports from 10 acres of fall wheat he has received 400 bushels; another from five acres, 212 bushels. From what it learns fall wheat will run from 35 to 45 bushels per acre in Markham and Vaughan, with a few exceptions. The barley in most cases is housed and will be a much better crop than anticipated, and the sample very superior.

**LARGE CHEESE FACTORY.**—The wells (Minn) *Atlas* gives a description of the Wells Cheese Factory, which went into operation May 18, 1871. It is claimed this is "the largest and most complete establishment of the kind in the United States." The building is of brick, three stories high, 32 by 82, with a wing 20 feet by 30 feet. It is claimed to have a capacity for working up the milk of 3,000 cows. At the time this description was written the milk of 225 cows was being received, but this number was expected to be largely increased the present season. The superintendent of the factory is Mr. O. S. Martin, formerly of Vermont, lately of the Sycamore, Ill., Factory.

**BUTTER TRADE OF CORK.**—A recent mercantile circular from Cork, Ireland, styles that place the greatest butter market in the world. During the season just closed, 1870-71, the year's supply was 389,393 firkins, of an estimated value of nearly £1,500,000. The Cork butter market, under its present system of management, was established, it seems, in 1769, 102 years ago. The records show a constant advance in successive decades, in the value of the article, although of course prices fluctuate from year to year. Thus the general average value

for the ten years, 1861-71, was 116 shillings per cwt., against 114 shillings in 1841-51. Indications seem to be that the raise will continue, or at least that any falling off is quite unlikely.

**EFFECTS OF MIXING CREAM**—That the cream of different cows when mixed does not produce butter at the same time, with the same amount of churning, has been nicely illustrated in the family of Mark Lughes, at West Grove, Pa., recently. They had an Alderney heifer in good flow of milk, and an old cow, a stripper; their cream, worked together, it was observed that they did not make butter enough for the bulk of the cream. The buttermilk also looked rich, and seemed to collect a cream upon it. They put the buttermilk in the churn again, after having the butter first to come, and make about five pounds. They churned again for a few minutes, and found from two to three pounds more butter in churn; showing that the heifer's cream had made butter first, and that the old cow needed several minutes more churning.

The Chatham *Banner* says Messrs. J. & F. Wixson, of Bledheim sold some thorough-bred sheep to Mr. D. D. Wallace, of Michigan, last week, at prices which should encourage our farmers to engage in the breeding of good stock. A South Down ram was sold by Messrs. Wilcox for \$30; and one pair of ewes of the same breed, at \$40. The sheep was shipped for the West on Friday last. In connection with this subject, would it not be well to consider if Michigan farmers find it profitable to come to Canada and pay such prices for improved sheep, whether our own breeders would not find it profitable to devote their attention to the raising of improved stock and stop the breeding of the commoner kinds altogether. If it pays to raise first-class sheep in Michigan, why should second-class be the rule (not the exception) in Canada.

The flax season has fairly commenced, and Messrs. Marshall and Fuller of the flax mills at Strathroy desire the *Beacon* to state as they often find that farmers, who have not raised flax before, have great trouble to know when it is fit for market, they would recommend them to test the flax bowls by taking the last pulled and greenest of the flax from the centre of the shock and rub it in the palm of the hand. If any is found to stick to the hand, and does not shell out freely, let it stand a few days longer. They find that in some seasons, like the present, it takes much longer to dry out than in hot weather. Do not on any account bring flax in till it is thoroughly dry, as the seed cannot be separated from the bowls, and, consequently, goes to waste, making a reduction in the price necessary.

#### THE ROYAL AGRICULTURAL SOCIETY'S PRIZE FARM.

The *Gardener's Chronicle* gives the following account of the farm which this year received the distinction of the Royal Agricultural Society's first prize for the best farm in the district in which the show was held:

We have again to report the triumph of the four-course crop rotation—this year pure and simple. The prize farm in the Royal Agricultural Society's Wolverhampton district has been cultivated by its present tenant for more than twenty years upon this principle; and no variation from it, for the

clover crop, has been permitted. There has been no such device as an eighth in peas or beans in order to create a double interval of time between successive clover—hardly anything in the way of a catch crop, such as the management of last year's prize farm sanctioned, in order to vary the rapidly recurring monotony of cultivation under the four-field course of cropping. Wheat, turnips, barley and clover, have been the almost invariable succession; and the land at Sherlowe, the farm which has been this year decorated, looks as if it liked it. The wheat, indeed, is only fair; but the winter had destroyed so much that a great deal had to be re-sown, and it is very creditable to the management that it looks so well. The mangel-wurzels, swedes, and common turnips, are all first-rate. The barley is magnificent. The second growth of clover, with rye-grass among it, is giving a good bite to lambs and yearlings, though the crop of hay from it has not been very good, and a good deal of the second year's growth had been kept on, owing to a difficult seed-time and consequent loss of plants last year. "You will see nothing very remarkable in the cropping," we were told, "but the live stock is undeniably first-rate." The country generally 'hereabouts is well cropped, and that may account for the judgment given us of this year's produce; for, as regards the half occupied by the barley and the green crops, the land was covered as one rarely sees it on the best of soil at this season of the year; and the quality of the land at Sherlowe is not by any means of the best, although the soil is such as presents no difficulty to the cultivator. The decision of the judges this year, unlike that of last year, has no doubt been materially influenced by the quality and management of the live stock of the farm. A better herd of Herefords, a better flock of the Shropshires, one rarely sees. So far as derived from them—the annual meat produce of the land (rather more than 400 acres, of which less than 300 are arable) may be put at 25 to 30 two-and-a-half to three-year-old Herefords, sold at from £30 upwards each, derived from about as many cows, which, with their produce up to this age, make up the Sherlowe herd; and some 200 fat shearlings, fed up to 15 months, and then fetching 50s and upwards as mutton—the produce of 150 to 160 capital Shropshire ewes, which, with their lambs, make up the Sherlowe flock—as compact, tidy, and symmetrical a lot of sheep as if they were pure-bred Southdowns. We do not see that these are equal to the consumption of 70 acres of such a green crop as is this year awaiting them—but of any further purchase of stock for winter keeping we have no information. Besides these there is a varying quality of pork and bacon, not bred, upon the farm. The grain produce may be put at 4 to 4½ qrs., or sometimes more, of wheat, over some 70 or 75 acres, and from 44 to 50 bushels—this year certainly more—of barley over a similar extent. This, it must be remembered, is the produce of only second-rate, and the most part light and easily worked, red land. It is a produce due not merely, to natural fertility and good tillage, but to the large purchases of oil cake and manures which are annually made. Four pairs of horses, with an old one, accomplished all the work at Sherlowe Farm—easily accomplish it, for everything already is done, and the horses are all at grass. The mangolds and earlier swedes already nearly cover the land; the later swedes are being singled; kohlrabi is a capital plant, all singled; the common turnips are ready for the hoe. Seventy-two

acres are thus covered with a most promising plant. All the farm is as clean as possible; we saw no couch nor any weed that we remember, unless the plantain among some imperfect clover-plant be considered one. Some 20 tons of Proctor and Ryland's, and Griffin and Norris's turnip manures, and two tons of nitrate of soda are applied every year; and a large quantity of farm-yard dung from caked beasts is made in stalls and yards. The landlord has done his part as effectually as the tenant. The farmhouse is a mansion, and the buildings are as well equipped and complete a homestead as anyone would wish to see. The roads are good, the land is drained, the fences are well kept, the lines of Thorn as clean, and tilled each year as carefully as any other crop upon the farm. Credit is due, we understand, to Mr. Forster, for much of the present arrangement of the land. It was formerly subdivided with great irregularity—and the larger fields and straighter fences are his handiwork. A large field of rough and marshy pasture-land has been lately drained, and is being gradually got into better cultivation, partly by paring and burning, partly by ordinary arable tillage, prior to laying it down again. A large extent of a most promising crop of oats standing on this temporary broken up land is one of the features of this year's cropping. Sherlowe may be taken, on the whole, as a sample of clean and business-like, comparatively small farm management, where no great difficulty exists, but where, by liberal treatment, the soil has been made to yield much beyond the produce of its natural fertility. We are glad to see, from the extra prize which they have been able to award, that the judges have had their eye upon the profitable character of the management as the main test of its merit. Mrs. Sankey, who receives one of these extra prizes, farms not far from Sherlowe. We can congratulate her upon magnificent crops of wheat and beans, a flock of useful large-framed Shropshire sheep, and well-kept fenc's, all of which we saw upon our way. And we congratulate Mr. Forrester upon a success achieved apparently by long continuance in well doing according to the ordinary rules of management proper for light-soil cultivation, upon a moderately-sized farm of mixed arable and pasture-land. A hamlet, with the parish-church, lies at some little distance, on the northern or north-western side of farm; large and open fields, with occasional woodland, slope southwards from it; and Sherlowe itself, so liberally and handsomely equipped, looks out upon a small English landscape, the morning shadow of Wrekin stretched over it, and the distant Welsh hills bounding it upon the west. It is the ideal of a gentleman farmer's home.

#### FORTHCOMING EXHIBITIONS.

**CITY OF TORONTO EXHIBITION.**—A grand Fall Exhibition will be held, under the auspices of the City of Toronto Electoral Division Society, at the Crystal Palace and Grounds, on the 18th, 19th, and 20th September, 1871. Upwards of \$5,000 will be offered in prizes—competition open to all the world. The prize list is divided into three departments—Agriculture, Horticulture, and Arts and Manufactures—which are again subdivided in the usual manner of prize lists: The Poultry class has awarded to it about the sum of \$150 in prizes, and exhibition birds are to be shown in pairs. No prizes are

offered for chickens of this year. The varieties for which prizes are offered are:—Bantams, game, feathered legged and Sebright; Brahmas, dark and light; Cochins, partridge and white; Dorkings, buff, white and colored; Game, black reds and duck-wing; Guinea Fowls, Hamburgs, gold and silver; Houdans; Pea Fowl; Polands, gold and silver; Spanish; Turkeys, bronzed and any variety; Ducks, Aylesbury and Rouen, and any variety; Geese, common and China; Pigeons, for the best collection; Rabbits; the best collection of poultry, and a prize left for extras. Entries close on the 18th September, and must be made on proper printed forms, which will be furnished by the Secretary, Mr. W. Edwards, Bond St., Toronto.

**THE WESTERN FAIR.**—The second annual Exhibition will be held at the City of London on Tuesday, 26th, to Friday 29th September, 1871, at which premiums to the amount of \$8,000 will be offered, of which a portion, amounting to \$191, is offered in poultry prizes. The subdivision of the poultry is in somewhat the usual form, but not embracing quite so many varieties as we would wish to have seen. Entries close on the 16th September, but on payment of an extra fee of 50 cents, entries will be received up to the 23rd of September.

#### ONTARIO BEE KEEPER'S ASSOCIATION.

Editor Ontario Farmer,

I wish to call the attention of all persons interested in bee culture to the fact that there is a well-organized Bee Keepers' Association existing in the Province, of which the Rev. W. F. Clarke, Editor of the ONTARIO FARMER, is President, and Mr. J. H. Thomas of Brooklin, Vice President.

The annual meeting always takes place at the time and place of the Provincial Show, in addition to which it is proposed to hold special sessions in London this year during the time of the Western Fair.

The admission to meeting is free to all members who pay fifty cents per annum.

Ladies are admitted as members free.

Any person having a subject or subjects which they wish to have brought up for discussion, will please forward them to me, before the 10th of September next, after which further notice of the meetings will be given.

A. C. ATTWOOD,  
Sec. Treas. of O. B. A.  
Vanneck P. O.

August 17th 1871.

The Markham *Economist* says that the wheat crop in that section has not been as good since 1855 as it is at the present season. We have conversed with the threshers, who claim that there is an average of forty-two bushels per acre throughout the townships of Markham, Pickering, Scarborough, and Whitechurch. Barley is also a good crop, and an excellent sample. Oats and peas are more than an average crop. Should there be a fair demand, we have every reason to expect a flourishing fall trade.

**IMPORTATION OF STOCK.**—Mr. James Main, of Trafalgar, has lately returned from England with an importation of Suffolk pigs, being a lot of first prize animals, which were purchased regardless of cost. The farmers of Holton would no doubt benefit by the acquisition.

The *Kincardine Reporter* is sorry to note that the valuable pineries of Messrs. Dagg & Hewitt, covering about 150 acres, have been destroyed to a large extent by the fire fiend. Many of the trees have been entirely consumed, and the rest of them killed or thrown down, so that what remains must be got out very soon to be of any value to the owners.

Lord Dunmore has concluded an important purchase of two heifer calves. They are from Duchesses 101st and 103rd, which it will be remembered, were sold to Mr. Cochrane by Captain (now Major) Gunther, for 1,000 guineas and 1,500 guineas respectively, last summer. The calves of these two cows have been purchased from Mr. Cochrane by Lord Dunmore, at precisely similar prices, or 2,500 guineas for the two, and will be shipped from Canada for this country in September.—*F. L. Mear* (*Scottish*.)

Agricultural implement swindlers and their victims still live. The latest is from the *Fergus News*, which states that Roberts & Meeks, the cutting-box swindlers, made a good haul in that neighborhood, having obtained notes representing \$750 from five farmers in the five townships adjoining Fergus. The following are the victims: Alexander Carroll, East Garafraxa, \$150; Thomas Cleghorn, West Garafraxa, \$150; Peter Armstrong, Eramosa, \$150; R. Jack, \$150; Robert Wilson, Nichol, \$150. If the rascals have done anything near as well elsewhere they must be in pretty good circumstances.

Two stock breeders—Mr. Chas. Mason, of Tuckersmith, and Mr. Joseph Fisher, of Colborne—recently arrived at Clinton station with their imported stock from England. The *Clinton New Era* says the steamer *Germany* brought out to Ontario 101 head of stock, viz:—Richard Gibson, 13 head of cattle, 1 bull, and 10 pigs; John Snill, of Edmonton, 1 bull, and 15 sheep, and 8 pigs; John Craig, 10 pigs, paying as high as £75 sterling for one pig; Joseph Kerby, Milton, 8 sheep, 1 pig, and 9 chickens; Mr. Thompson, of Whitby, 8 cattle and 3 pigs; Mr. Stanton, of Thornhill, 5 cattle; William and Hugh Campbell, a cow and calf each; Charles Mason, of Tuckersmith, 2 entire horses; Jos. Fisher, of Colborne, 3 entire horses, 1 filly, also 2 pigs, which he calculated had cost him, laid down at Clinton about \$150 each!

**RECENT IMPORTATIONS OF THOROUGH-BREDS.**—Referring to recent importations of thorough-bred stock into Canada, we note the arrival of Mr. R. J. Stanton, of Birch Grove, Thornhill, township of Markham, who brings with him the following valuable Shorthorns: 1 bull, Baron Wild Eyes, bred by Colonel Gunther, of Wetherby Grange Farm, Yorkshire; 4 heifers, viz., Bettie Bacon, by Friar Bacon; La Brillante, by Reformer; Second Lady, by Lord Darlington; and Second Dutchess, by Reformer. He also brings 5 thorough-bred Berkshire pigs, from the celebrated stock of Rev Mr. Brawley, of Wiltshire. This is his first year in Canada, as well as his first venture as an importer of thorough-bred stock. We bespeak for him such encouragement as will induce him to renew his

efforts in the laudable enterprise of the improvement of stock in the Province of Ontario.

The editor of the *Turf, Field and Farm* states that the preparation of the following has occupied the time and attention of an assistant editor many months, and is put forth as approximately correct, as showing the number of horses in the United States: Alabama, 165,063; Arkansas, 199,600; California, 300,611; Connecticut 40,150 Delaware, 23,160; Florida, 18,470; Georgia, 198,300; Illinois, 1,340,320; Indiana, 890,340; Iowa, 199,580; Kansas, 35,301; Kentucky, 650,011; Louisiana, 98,320; Maine, 71,110; Maryland, 99,112; Massachusetts, 49,450; Michigan, 201,340; Minnesota, 45,780; Mississippi, 117,780; Missouri, 520,640; New Hampshire, 45,101; New Jersey, 85,460; New York, 703,120; North Carolina, 169,308; Ohio, 1,200,000; Oregon, 40,800; Pennsylvania, 902,300; Rhode Island, 9,120; South Carolina, 98,125; Tennessee, 300,975; Texas, 600,250; Vermont, 71,840; Virginia, 430,960; Wisconsin, 149,987; Nevada, and Territories, 1,000,000; Total, 11,081,676.

Considerable impetus has recently been giving to the importation of thorough-bred stock from Britain, and it is probable that a larger number of valuable animals will be shipped across the Atlantic to this continent during the present summer than in any previous year. The principal buyers at the sales of pure-blooded stock in England, including the Royal Agricultural Society's Show, have been Americans or Canadians, and breeders have realized very high prices. Among latest importations, a valuable lot has just been safely brought over by Mr. Snell, who has returned from his recent trip to England with a beautiful yearling short horn bull, British Baron, bred by Col. Townley, four Cotswold shearing rams, three Leicester shearing rams, and a number of ewes besides a choice selection of Berkshire pigs—among them the second-prize boar at the Royal Show in Wolverhampton. Mr. Craig and Mr. Kirby also brought over in the same vessel with Mr. Snell's stock some valuable Berkshire pigs and Leicester sheep.

## Our Country.

### NOTES OF A NATURALIST.

The swallows of Canada, with the exception of the bank swallow, differ specifically from those of Europe. None, of course, stop during the cold months. They make their appearance and exert with marked expedition. The chimney swallow (*H. American*) is essentially rural, preferring scattered settlements to towns. The house martin (*Cotyle bicolor*) and small black swift (*H. pelagica*) have points in common with their transatlantic brethren, to wit the house martin and black swift; but of all this kind none is more attractive than the large purple swallow (*Progne subis*). This welcome harbinger of spring is held up by the Canadians as the first certain indication of the budding leaf, when frosty nights still retard vegetable growth. The purple swallow is one of the most powerful of its tribe, and will attack rapacious and all other birds that happen to intrude on its haunts. For the latter reason it is encouraged about houses, and swallow cotes are built, where it breeds year by year—indeed, there is an impression



that the same individuals repair to certain cotes annually. I have seen hawks and carrion crows compelled to flee before the audacious attacks of this bird. It is a lively scene to witness swallow after swallow shooting upwards from its cote and darting wildly at the intruder, which, on finding himself assailed at all points, decamps with speed, pursued by the harsh screams of the swallow. Then, when he is fairly beaten beyond the confines of the town, the pursuers are observed returning to their cotes, which are usually placed on poles attached to the gables of barns or outhouses. The cold nights towards the end of August cause the broods and old birds to assemble in flocks, when the first frosty night before the 5th of September sends them all southward, to Mexico and the States.

In the depths of the New Brunswick forest, among the haunts of the moose, caribou, stag, and bear, where the lumberers' camp is the only indication of civilisation, there, at all seasons, assemble flocks of white-winged crossbill, as docile and familiar in habits as robin redbreast. It crowds in flocks on the refuse-heap, picking among the debris, and is said to show a marked predilection for salt fish, which seems somewhat strange in the regimen of the genus, and even the order, it belongs to. It also rears its young in mid-winter, when the thermometer often ranges 30 degrees below zero of Fahrenheit. The same course is pursued by the moose bird, or Canada jay, which is also a winter companion to the lumberer, becoming so tame that it often eats out of his hand.

The southerly migrations of birds are completed in this portion of the continent by the end of November. The last batch of robins has disappeared, and now the forests seem almost deserted; and the stillness is remarkable, and we listen in vain for the joyous notes of such welcome summer residents as the song sparrow, or the piping call of the Pennsylvanian finch, or the flute note of the hermit thrush. However, the brave little black-headed titmouse, uttering its well-known *ic dee dee dee*, is seen fighting among the evergreen and bare boughs during the severest cold, when the thermometer stands at 30 deg. below zero, the white and red-bellied nut-hatchers bearing him company. It is then the great horned owl, and four others of its congeners, may be seen sweeping past in the gaps of the forest after squirrels and other rodents, and the carrion crows assemble about the settlements on the outlook for carcasses of cattle and such like.

As soon as the leaf has fallen, from the north come flocks of that handsome bullfinch the pine grosbeak (*Parus canadensis*) to feed on the elder-tree berries. This bird delights also in the forest solitudes, where its chirp is often the only sound that breaks the stillness around. When feeding it is easily approached, and often caught by a hair noose slipped over the head. The cold of the central part of the province is evidently too trying for even its sturdy frame, for seldom are they seen after January; perhaps they push further southwards, or towards the less rigorous climates on the Atlantic coast. A sure sign of the coming winter is the appearance of the snow buntings (*Fringilla nivalis*) and its European ally the redpole, both common to the boreal regions of the old and new worlds. The plumage of the former is only somewhat paler in midwinter, and more downy, to enable them to withstand the cold. Often after a heavy

fall of snow I have seen the latter so tame that it only sufficed to throw a few cinders on the snow, when flocks repaired to the spot, and might be caught almost with the hand. There is then a hard struggle for existence with many of the feathered tribes. Sometimes the migratory thrushes and the earliest visitors in spring, such as the snow bird (*Junco hyemalis*), arrive before the last snow has fallen. Then a heavy fall in April renders the little creatures perfectly helpless, and hundreds die of cold and starvation.

The stillness of the forests in February is remarkable; the pines and spruces, with their boughs overburdened with snow, look like the scenery of some Christmas pantomime, whilst the leafless limbs of the maples and hardwood trees stand out in ghastly relief against the background. I often roam in snow-shoes down the lumber roads and pathways, through the dense clustering trunks of the primeval forest, and—excepting the broad foot-prints of hares, and occasional track of a red fox (*V. fulvus*), ermine, weasel, or red squirrel—there is nothing animated to be observed in these wild woods.

There can be no doubt that, although the snow is the cause of the declination of the boughs of certain coniferous trees, there is at the same time a contraction taking place in the fibres of the bark and wood on the lower surface. This is proven by relieving the branches of its snow, when it will be found to return only partially to the horizontal. The long and rigorous winter of this latitude does most assuredly tend to bring about a more decided bending of the branches of the spruces in particular, as compared with allied species under less trying circumstances. There can be no question, therefore, that, besides the mere mechanical pressure, cold has an influence in producing the graceful downward slope to the boughs of many of these trees, as observed in this and the northern forests of Europe and Asia.

Many of the wild quadrupeds of Canada are entirely depending in winter on the pine tree family for subsistence—for example, the hare, birch partridge (*Bonasa umbellus*), and the spruce or Canada grouse (*Tetrao canadensis*). It is well known that the flavor of their flesh becomes so tainted by their pine food that it is scarcely palatable, more especially the latter, which is not eatable after November, and even in summer partakes strongly of their food—*The Field*

#### THE GAME LAWS.

Mr. T. G. Coursolles has written the following to the *Ottawa Times*:—

Sir,—As the game laws of Ontario have been again amended during the last session of the Local Legislature—for the third time since Confederation—will you be so kind as to publish, for the benefit of my brother sportsmen and that of the public, the following synopsis of the game laws as they now exist both in Ontario and Quebec:—The prohibition time for the killing of ducks and teal has been extended in Ontario, by the last amendments, to the 15th of September, that is one month longer than it was by the former law, but my opinion is that it would have been better to fix it at the 1st of Sept.

as is now the case for Quebec. The step made was too long, as formerly the shooting season opened, for ducks, on the 15th of August, which was too early, as many young ducks were not then full-fledged yet.

As for snipes and woodcocks, the shooting is made to open too early, 15th of July, and it might have been deferred with advantage to the birds and sportsmen for three weeks or one month longer. I have killed snipes in the latter end of August, last year, which have not attained all their growth, and had not finished to change their first plumage. Woodcocks are earlier, but the 12th or 15th of August would be soon enough for them.

The deer shooting has been extended, in Ontario, from the 1st to the 19th of December, which is quite right; and the shooting of quails is certainly prohibited for three years from the 15th of last February, which, I hope will have a good effect on them, as they were fast disappearing from the Western part of the Province.

1. In Ontario, deer or fawns, elk, moose, or caribos may be hunted, taken or killed between the 1st of September and the 19th of December—34 Vic., ch. 35.

In Quebec, from 1st September to the 1st February following—31 Vic., ch. 26.

2. In Ontario, wild turkey, grouse, pheasants and partridges may be killed between the 1st of September and the 1st of January—21 Vic., ch. 12.

In Quebec, between the 1st of September and the 1st of March following.

3. In Ontario, no quail shall be taken or killed for three years from the 15th of February, 1861, thereafter they may be from 1st October to 1st January—34 Vic., ch. 35.

In Quebec, from 1st September to 1st of March—31 Vic., ch. 26.

5. In Ontario, black ducks, gray mallards, teal and wood ducks, may be killed from the 16th of September to the 15th of April; other kinds of ducks, wild swans or geese, from the 15th of August to the 1st of May following—34 Vic., ch. 35.

In Quebec, from the 1st of September to the 1st of May for all of them, west of Three Rivers, and from 1st of September to 15th of May following east of that city, except in the lower St. Lawrence, east of "Brandy-Pots," where they may be killed at all times for food—32 Vic., ch. 33.

6. In Ontario, beavers, minks, sables, otters, and fishers, may be trapped or killed between the 1st of November and the 1st of March following; muskrats from the 1st February to the 1st of May; hares between the 1st of September and the 1st of March following—32 Vic., ch. 12, 34 Vic., ch. 35.

- In Quebec, wild cats and martens may be killed or trapped between the 1st of November and the 1st of April; skuunks from 15th of October to 15th of April; otters from 1st of November to 1st of May; muskrats from 21st of October to 1st of May; hares from 1st of September to 1st of February.

7. No traps or snares are allowed for any of the feathered game above mentioned, nor for any of the protected wild animals, except beavers, muskrats, minks, sables, otters, and fishers, in Ontario, to which hares are added in Quebec; nor the use of poisonous substances, nor spring guns, batteries, night lights, or sunken punts in the hunting of geese or ducks.

8. Destruction of eggs or nests is entirely prohibited. Night shooting is also entirely prohibited.

9. Possession of any game is prohibited within the periods during which shooting or killing is not allowed; and sales of animals or game protected are not allowed after fourteen days from the close of the shooting season.

10. In Ontario offences against the law shall be punished by a fine of from \$2 to \$25 with costs, or by an imprisonment not exceeding thirty days. Any one may prosecute the offender by a justice of the peace, and the fine goes to the informer.

In Quebec, the fine may be from \$1 to \$50, and the imprisonment three months. One single witness is sufficient to procure the conviction of the offender before a justice of the peace, and the whole of the fine goes to the informer.

11. By the 27-29 Vic., ch. 52, insectivorous birds are protected from the 1st of March to the 1st of August, under a penalty \$1 to \$10. Eagles, falcons, king-fishers, wild pigeons, rice birds, and crows may be killed at all times.

## Hearth and Home.

### A CASE IN POINT.

One of the unforeseen results of making "woman's rights" the law of the land, is revealed in a story which comes from Wyoming territory. Mrs. Nix, of that female elysium, was attending Court as a juror—the jury on which she was impanelled sat all day, and even the shades of night brought it to no decision. Stern justice, represented by the judge, handed the jury over to the custody of the bailiff, who straightway locked it up for the night. This may be considered act first. Meanwhile Mr. Nix was doing his awkward best at home with a squalling baby, anxiously awaiting his wife's return. Learning the upshot of matters he sought the officers of the Court and appealed to their sympathies for the release of his better half, but met with no concurring response. Failing in this, the perplexed Nix obtained a writ of *habeo corpus*, but that usually potent instrument proved unavailing for the emergency; then he petitioned the Judge to send the Jury to his house, which the Judge refused to do. With a fertility of device born of despair he next carried the uproarious infant Nix to the door of the jury-room, and demanded admittance for it, but the law was explicit in the declaration that no strange person could be admitted to the jury-room, and legally speaking the infant was a person. Lastly, with a fine perception of what would make the shoe pinch, the distracted Nix sought the services of a good looking nurse maid, took her home to his dwelling, and handed over his domestic establishment, including himself, to her keeping. With a pardonable consciousness of future possibilities, the prudent husbands of Wy-

oming have taken warning by the Nix case, and are busily engaging good-looking handmaids to administer the domestic government when the legitimate queen of that realm is absent administering the affairs of state.

### TENANT HOUSES.

Tenant houses on the farm should be more common. Farm laborers, those we pick around or who come along looking for a job, and hired for a few days are very often of a very indifferent character. Married men on the contrary, have responsibilities, hence are steadier. These latter are the ones to employ on long terms, and for such tenant houses are necessary. The mechanic when his day's work is completed, goes to his own house, not that of his employer. The same we may say of other trades, all except in cases of apprenticeship, leading a distinct and separate life. The charm of life, the privacy of the domestic circle, is not broken in upon, as it must unavoidably be where the help is under the same roof. Little family affairs, nothing in themselves, but annoying when made common, are thus left at home; and your man cannot hire out to your neighbor next year and complain of the poor living he had at farmer A's, for his living he makes to his taste.

One great end attained by the tenant system is the lightening of the work and cares of the housewife. When I call on my farmer friend and take the noon meal with him, while watching the troop of hungry helps stowing away great heaps of food, I glance at his overworked delicate wife, and begin to calculate how many more seasons she will grace and serve his home. I fear that the machinery of the farm is not properly adjusted. Most of the men are married, and to women of far stronger constitutions than the one his wife is blessed with. Put these men in tenant houses, and let their wives cook and wash and mend for them.

By furnishing his help with houses, the farmer is also enabled to supply them with provision with profit to both. Our townsman, Mr. Geddes, widely known for his writings on Agriculture, and a practical and successful farmer, provides houses for his laborers, and considers it the best economy.

While writing about hired men I will just tell a little story and then close. Two seasons ago there was a sort of agency in New York city for supply of farmers with men. It seemed a good thing, and some farmers around here made application to the agency. Well, two men were sent to one farmer, and were put to work. A few weeks afterward I enquired of him how he liked his help. "Good for nothing, and worse than nothing," was the reply. "Being city men they have city habits. As there is no saloon on the farm to spend the night hours in when the days work is done, they start for the village tavern. Now what are those men worth to me after a night's carousal? I must rid myself of them immediately." And they went.—*Cor. Germantown Telegraph.*

### PRESERVATION OF THE TEETH.

HORACE WALPOLE says ("Letters," vol. iii. p. 276): "Use a little bit of alum twice or thrice a week, no

bigger than half your nail, till it has all dissolved in your mouth, and then spit it out. This has fortified my teeth, that they are as strong as the pen of Junius. I learned it of Mrs Grosvenor, who had not a speck in her teeth till her death" Do not let your brushes be too hard, as they are likely to irritate the gums and injure the enamel. Avoid too frequent use of tooth powder, and be very cautious what kind you buy, as many are prepared with destructive acids. Those who brush their teeth carefully and thoroughly with tepid water and a soft brush (cold water should never be used, for it chills and injures the nerves) have no occasion to use powder. Should any little incrustation (tartar) appear on the sides or at the back of the teeth, which illness and very often the constant eating of sweetmeats, fruit, and made dishes containing acids will cause, put a little magnesia on your brush, and after two or three applications it will remove it. While treating on the care of the teeth, which is a subject of the highest importance to those who have young families, and in fact every one who wishes to preserve them, I beg to remind my readers that as the period generally occupied by sleep is calculated to be about (at least) six hours out of the twenty-four, it would greatly promote the healthful maintenance of the priceless pearls whose loss or decay so greatly influences our appearance and our comfort, if we were to establish a habit of carefully cleaning them with a soft brush before going to bed. The small particles of food clogging the gums impede circulation, generate tartar and caries, and affect the breath. Think of an amalgamation of cheese, flesh, sweetmeats, fruits, etc., in a state of decomposition, remaining wedged between our teeth for six or seven hours; yet how few ever take the trouble to attend to this most certain cause of toothache, discoloration, and decay, entailing the miseries of scaling, plugging, extracting, and the crowning horror—false teeth!—*G. de J's Lady's Book.*

### TO CLEANSE CARPETS.

Carpets that do not require to be taken up, should be loosened at the edge, and with a dustpan and brush, all the dust may be removed; if there are any traces of moths, wash the floor with strong turpentine or kerosene, putting the carpet down quickly, and the moths will have their quietus. The disagreeable odor will soon disappear if the windows are opened widely, and you can be certain that your carpets will not be ruined this Summer. This same burning fluid will drive out and keep away the moths from upholstered furniture. It can be put on with a cloth, and if pure will leave no stain, but brighten the colors. Before applying it, brush out the cushions with a hand-brush, and damp cloth, to remove all the dust. Straw matting should be washed with a cloth dampened in salt water. Take care not to wet it but little, for if the matting is soaked through it becomes brittle. If Indian meal is sprinkled over it, or damp sand, and then thoroughly swept out, it will also cleanse it finely.

OUT-DOOR WHITEWASH—C. E. B. Champaign, Ill. asks us to republish the following recipe which he has lost and regards valuable: 2 quarts skimmed milk; 2 ozs. fresh slaked lime; 5 lbs whitening; put

the lime into a stoneware vessel, pour upon it a sufficient quantity of milk to make a mixture resembling cream, and then add the balance of the milk. Crumble the whiting, and spread it on the surface of the fluid. Stir or grind as you would lead paint, and apply as you do other paints. It dries quickly, and a second or third coat can be added if desired. It is inodorous, does not rub off. This quantity will cover 57 square yards with one coat. It may be colored, if desired, by adding coloring matter.

#### CLEANSING BLANKETS.

It is quite as important to have blankets on our beds clean as to have the sheets pure and white. The *Boston Journal of Chemistry* gives the following method of cleansing them.

"Put two large tablespoonfuls of borax and a pint bowl of soft soap into a tub of cold water. When dissolved, put in a pair of blankets, and let them remain over night. Next day rub and drain them out, and rinse thoroughly in two waters, and hang them out to dry. Do not wring them."

But this is not the only domestic use to which borax may be put. Says the same journal, "Borax is the best cockroach exterminator yet discovered. This troublesome insect has a peculiar aversion to it, and will never return where it has once been scattered. As the salt is perfectly harmless to human beings, it is much to be preferred to the poisonous substances commonly used. For cleansing the hair, nothing is better than a solution of borax water. Wash afterward with pure water, if it leaves the hair too stiff. Borax dissolved in water is also an excellent dentifrice or tooth-wash."

#### CARPETS, DUST, AND DISEASE.

An atmosphere impregnated with the dust which has been gathered in carpets and remained there for a considerable length of time, is positively unhealthy. The dust after being stagnant for some time, especially in warm weather, presents myriads of animal-culæ. To prevent the evil the carpets should be cleaned often. The dust should be thoroughly removed every month. The trouble of taking up, shaking, and replacing will be amply repaid, first, in the matter of health, and secondly, in preserving the carpet.—*Home and Health*.

**INGENIOUS DEVICE.**—A British scientific publication gives the following; "Many of your readers have doubtless had more or less trouble, at some period of their lives, in repairing water pipes where the water could not be sent off conveniently at the fountain head or some intermediate point. In going to my office a few days since my way led past a place where a man was repairing a lead pipe, which had been cut off accidentally in making an excavation. There was a pressure of water more than fifty feet head. His plan seemed to me to be novel and ingenious. The two ends of the pipe were plugged, and then a small pile of broken ice and salt was placed around them; in five minutes the water in the pipe was frozen the plugs removed, a short piece of pipe inserted and perfectly soldered,

and in five minutes the ice in the pipes were thawed and the water flowing freely through."

**PERSPIRATION ODORS.**—The unpleasent odor produced by perspiration is frequently a cause of vexation to persons who are subject to it. Nothing is simpler than to remove this odor much more effectually than by the application of such unguents and perfumes as are now in use. It is only necessary to procure some compound spirits of ammonia, and place about two tea-spoonfuls in a basin of water. Washing the face, hands and arms with this, leaves the skin as clean, neat and fresh as one could wish. The wash is very harmless and very cheap. It is recommended on the authority of an experienced physician, and it ought to be tried at least by all those whose persons are so offensive in this respect.

Horace Greely says: "One million families are trying to live by selling liquors, tobacco, candy, etc., in our cities who could be spared therefrom without the slightest public detriment; and if these were transferred to the soil, and set to growing grain, meat, wool, etc., or employed in smelting the metals, or weaving the fabrics for which we are still running into debt in Europe, our country would increase its wealth at least twice as fast as now, and there would be far less complaint of "dull trade" and "hard times."

**TO CURE HAMS.**—The following receipt for curing hams obtained the first premium offered by the Maryland State Agricultural Society:—Mix 2½ lbs. saltpetre finely powdered, ½ bushel fine salt, 3 lbs. brown sugar, ½ gallon molasses. Rub the meat with the mixture; pack with the skin down. Turn over once a week, and add a little salt. After being down three or four weeks, take out, wash, and hang up two or three weeks until it is dry. Then smoke with hickory wood three or four weeks, then bag or pack away in a cool place—not a cellar—in chaff or hay.

**TO SETTLE COFFEE.**—The genuine article can be nicely settled by beating an egg and stirring it on a batch of coffee, just as it is browned. The coffee must be cool enough so as not to cook the egg. It must be left near the fire long enough to dry. It settles the coffee as well as to use a whole egg every time it is prepared for the table, and does not take near as many dozens in the course of the year. The coffee pot should stand a few moments after being taken from the stove, or have a little water put in.

**A COOLING DRINK.**—Mix half a teaspoonful of powdered ginger, or a teaspoonful of extract of ginger, in a tumbler of water, and add a teaspoonful of molasses. This will be found palatable, will quench the thirst, and will prevent the ill effects which often follow an over dose of icewater and cooling draughts. In the West Indies ginger is considered one of the best preventives for the Summer complaints of the tropics.

**BEEF STEAK.**—In broiling a beef steak, whenever the coals blaze up from the drippings, a pinch of fine salt thrown upon them will instantly extinguish the flames. By carefully attending to this matter you may have your broiled steak or chicken crisp, but not scorched, and juicy, yet well done.

**APPLE MARMALADE.**—Take any kind of sour apples, pare and core them, cut them in small pieces, and to every pound of apples put three quarters of a pound of sugar. Put them in preserving

pan, and boil them over a slow fire until they are reduced to a fine pulp. Then put them in jelly jars and keep them in a cool place.—*American Housewife.*

**LIQUID SARCE.**—One cup of sugar and one third cup of butter, rubbed to a cream. Then stir in the well-beaten white of one egg. Flavor with nutmeg or lemon. Just before bringing to the table add one-fourth cup of boiling water.

## Arts and Manufactures.

### SCALES OF TEMPERATURE.

Many of our readers, in their search after information on beet root sugar, and other questions which are treated of in works published on the continent of Europe, will find the temperature therein stated at so much "Centigrade" or "Cent." This of course means the Centigrade scale of temperature; and as our English ideas are mainly founded on Fahrenheit scale (in which we have been educated), it is often very troublesome and disappointing not to be able at once to tell what so many degrees "Cent." means according to our scale "Fahr."

To meet this difficulty we have constructed the following table a reference to which will at once give the inquirer the information wanted by a causal glance. The following are the rules on which the table has been constructed:

To convert Centigrade to Fahrenheit—Multiply the number of degrees Centigrade by nine (9), divide the product by five (5), add 32 to the product, and you have the answer in Fahrenheit scale thus:

100 Cent. — Multiply by 9.

9

5)-900 Divide by 5.

180

32 Then add 32.

212 Answer—i. e., the heat of boiling water by Fahrenheit scale.

To bring Fahrenheit to Centigrade, reverse the calculation.

Fahrenheit commences at 0, which is the temperature of snow and common salt mixed.

He makes water just freezing 32°, and boiling water at the level of the ocean, or with a barometrical pressure of 30 inches, 212°.

The Centigrade scale starts from the temperature of freezing water, which it makes 0, it then considers water when boiling at the level of the ocean (or when the Barometer stands at 30 inches) 100; and the intermediate scale is divided into 100 parts or degrees; thus when the temperature is below freezing, the Centigrade scale has so many degrees "minus" attached to it, "Reaumer's" scale, also extensively used on the continent of Europe, and often referred to in books, is nearly one-fifth less

than Centigrade. This Reaumer scale also commences with freezing water, as 0, and makes boiling water at the level of the ocean (or 30 inches Barometer) 80°; so that by the table here given, if you have a heat given by Reaumer, all you have to do is to add a fourth to it (which is the same as deducting a fifth), this brings it to Centigrade, and you can then refer to the table for the corresponding degree Fahrenheit. Thus:

80 Reaumer is boiling water.

Add  $\frac{1}{4}$ .....20

100 Makes Centigrade; then look for 100 Cent., and you find 212° Fahrenheit.

These are all well-known facts; but the public, who are the chief readers of newspapers, have not scientific works always at hand to refer to, and this table may save a good deal of searching and trouble, besides placing the matter in a plain and easy point of view to those who may not have particularly studied the subject.

As both the Centigrade and Reaumer's scales start from freezing as 0, and the one makes boiling water 100 and the other 80°, the adding one-fourth or deducting one-fifth will not be mathematically correct in the low numbers, and the above calculation is near enough for all ordinary and practical purposes.

TABLE OF TEMPERATURE—"CENTIGRADE" REDUCED TO "FAHRENHEIT" SCALE.

Cent.	Fahr't.	Cent.	Fahr't.	Cent.	Fahr't.
0	32	36	96.4	72	161.3
1	33.4	37	98.3	73	163.2
2	35.3	38	100.2	74	165.4
3	37.2	39	102.1	75	167
4	39.1	40	104	76	168.4
5	41	41	105.4	77	170.3
6	42.4	42	107.3	78	172.2
7	44.3	43	109.2	79	174.1
8	46.2	44	111.1	80	176
9	48.1	45	113	81	177.4
10	50	46	114.4	82	179.3
11	51.4	47	116.3	83	181.2
12	52.3	48	118.2	84	183.1
13	55.2	49	120.1	95	185
14	57.1	50	122	86	187.4
15	59	51	123.4	87	189.3
16	60.4	52	125.3	88	190.2
17	62.3	53	127.2	89	192.1
18	64.2	54	129.1	90	194
19	66.1	55	131	91	195.4
20	68	56	132.4	92	197.3
21	69.4	57	134.3	93	199.2
22	71.3	58	136.2	94	201.1
23	73.2	59	138.1	95	203
24	75.1	60	140	96	204.4
25	77	61	141.4	97	206.3
26	78.4	62	143.3	98	208.2
27	80.3	63	145.2	99	210.1
28	82.2	64	147.1	100	212
29	84.1	65	149	101	213.4
30	86	66	150.4	102	215.3
31	87.4	67	152.3	103	217.2
32	89.3	68	154.2	104	219.1
33	91.2	69	156.1	105	221
34	93.1	70	158	106	222.4
35	95	71	159.4	107	224.3
				108	226.2
				109	228.1
				110	230

### HISTORY OF A DEFUNCT HORSE

A young gentleman just out of college, once remarked that it was exceedingly insalubrious to inhale the obnoxious effluvia arising from the cadaverous carcass of a defunct horse. He was undoubtedly right, and science has found a way of remedying the evil. They now make so many things out of the dead body of a horse that the animal must be a remarkably fine one if he was worth as much when alive as he is in the retorts and kettles of the chemist. As soon as the horse is dead, his blood is sought by the manufacturers of albumen, and sugar refiners, and by the burners of lamp black. Not a drop of it is allowed to go to waste.

The main and tail are wanted for hair cloth, sieves, bow strings, and brushes. The skin is converted into leather for cart harness, for boots and shoes, and strong collars. The hoofs are used for combs, horn work, glue, and in old times were the chief source of the spirits of hartshorn, now obtained from the gas house. The flesh is boiled down in the rendering vat, and much oil and fat is obtained from it. Some of the cheap bits may find their way into the cheap restaurants, and play the part of beefsteak, or help to enrich the hasty plates of soup of those establishments. The flesh left after all has been extracted from it that is of any service, is sometimes burned to be used as a manure, or is worked up into nitrogenous compounds such as cyanides, to be used by the photographer for taking our pictures.

The stomach and intestines make valuable strings and cords for musical instruments, and out of the bones so many useful articles are manufactured that it is almost impossible to make out a complete list of them. Among them are buttons, toys, tweezers, knife handles, rulers, cups, dominoes, balls, and the residue from all these things is burnt into bone black, to be used by the sugar refiner, who thus puts in a second claim upon the dead horse; and some part of the bone black is burned white to be used by the assayer in testing for gold; and when the refiner and assayer have finished with it, it is converted into super-phosphate to serve as a valuable manure on our land. The teeth are used as substitutes for ivory; and the iron shoes if not nailed up over the door to ensure good fortune to the household, are worked up into excellent wrought metal. Some portion of the bone black is converted into phosphorous for the manufacture of matches, and lately a valuable bread preparation is made of the phosphate, and medicines are prepared for the cure of consumptives.

### BARN BUILDING.

There is a principle which should enter into the construction of every barn, that its size should be in its height, whilst its height should not necessarily increase the amount of labor requisite for its use; for it will be readily perceived how much the weight of the grain itself must contribute to the capacity of the mow which holds it. A few feet in height adds but little to the original cost; whilst to extend the frame horizontally costs the same, and requires additional roofing, and the advantage of weight is comparatively lost. This height of barn, and economy of labour in using it, is attained by

constructing the inner frame with two sets of floors one above the other, using the upper one to drive into, thus reaching with the loaded wagon the height of the middle mow, instead of the bottom of it, and thus, too, superseding the necessity of pitching grain to any great height. And here it must be observed that the frame across the barn, which is between the floor and the mow, must be so constructed as that there shall be no cross timber in the way of the free use of the horse-power fork.

In barns heretofore built this principle has not been observed, whereby it has been necessary to raise hay over these cross-timber to a height which requires much more time and necessary labour than is otherwise required. The hay-fork should be used with a double pulley, and the horse walking on the opposite floor, can raise, without any extraordinary exertion, as much as the fork can take; in fact, with a mow thus constructed, a horse will, when the wagon is full, throw off almost one-fourth of the load at the first draught; the bottom of the mow being about nine feet below, the hay passes off without the immediate necessity of a man in the mow to dispose of it.—*Ohio Farmer.*

### HOW TO SOFTEN HARD PUTTY.

It is well known that common putty, with which glass window-panes are fixed in their frames, is made of powdered chalk and linseed oil. When old it becomes so hard that, in case its removal is necessary, a chisel and hammer must be resorted to. In fact it becomes like a stone, harder than the wood itself, pieces of which often break off unless peculiar care is taken in removing the putty. This hardness becomes a serious inconvenience when a large pane, say of valuable plate-glass, has to be removed for the purpose of repairs in the wood-work, or some other cause. Here the use of the chisel and hammer on the putty surrounding the glass may cause serious damage along the edges, or even total fracture.

An agent to soften the putty in such cases so that it may be removed with ease, is, therefore of some value. This may be effected with a paste of caustic potassa, easily prepared by mixing the caustic alkali, or even carbonate of potash or soda, with equal parts of freshly-burnt quicklime, which has previously been sprinkled with water, so as to cause it to fall into powder. This mixture is then mixed with water to a paste, and this spread on the putty to be softened. Where one application is not sufficient, it is repeated. In order to prevent the paste drying too quickly, it is well to mix it with less water, adding some soft soap instead.—*Manufacturer and Builder.*

### TANNING LEATHER.

I send you a recipe for tanning leather, which may prove useful to any farmer not acquainted with it. Soak the hide eight or nine days in water, then put it in lime; take it out and remove the hair by rubbing it, and soak it in clear water until the lime is entirely out. Put one pound of alum to three of salt, dissolve in a vessel sufficiently large to hold the hide; soak the hide in it three or four days, then take it out, let it get half dry, and then beat or rub it until it becomes pliable. Leather prepared

in this way will not do so well for shoes, but answers well for hamstrings, back bands, and various other purposes on the farm.—A., in *Southern Cultivator*.

### HOW TO WASH A CARRIAGE.

1st. Moisten the mud with a sprinkler, to make it soft, for if you begin by washing and rubbing, the grit in the mud will scratch off the varnish and paint, and in that way work damage.

2nd. After so softening the mud, wash clean with a water-filled sponge, changing the water so as to keep the grit out of the sponge.

3rd. After so washing thoroughly, sprinkle again all over with clean water, and then rub dry one way the way of the grain, with a piece of clean chamois leather, and the work will be done nicely, without a scratch.

The way to save time in doing the work is this:—Commence the sprinkling at the front of the carriage and go around to the starting place, by which time, following the same track, the mud will be soft enough to go on washing with the sponge, which should be first done on the body, on wheels afterwards. Green hands generally begin with the wheels, when the dripping of dirty water from the body requires the wheels, &c., to be washed over again.—*Minnesota Monthly*.

### USEFUL RECEIPTS.

To Septimus Piesse, the celebrated London chemist and perfumer, we are indebted for the following recipes and facts. The distinguished source from which they come is a guarantee of their reliability:

To CLEAN GILT JEWELRY.—Take half a pint of boiling water, or a little less, and put it into a clean oil flask. To this add one ounce of cyanide of potassium, shake the flask and the cyanide will dissolve. When the liquid is cold, add half a fluid ounce of liquor of ammonia, and one fluid ounce of rectified alcohol. Shake the mixture together and it will be ready for use. All kinds of gilt articles, whether Birmingham ware or "Articles de Paris," which having become discolored, may be rendered bright by brushing them with the above-mentioned fluid.

To HARDEN A POKER.—The fire poker, by constant use, becomes soft, and is generally more or less bent. This arises from its being left in the fire and becoming red hot, then being put on the fender, where it slowly cools, an operation which softens even the best steel. When a poker has thus become soft and bent, it may again be hardened by making it hot two or three times, and plunging it every time that it is hot into a pail of cold water. The rapidly cooling of steel makes it hard again.

INK ON BOOKS.—To remove ink-stains from a book, first wash the paper with warm water, using a camel's hair pencil for the purpose. By this means the surface ink is got rid of; the water must now be wetted with a solution of oxalate of potash, or, better still, oxalic acid, in proportion of one ounce to half a pint of water. The ink stains will immediately disappear. Finally, again wash the

stained place with clean water, and dry it with white blotting paper.

LAUNDRY PAPER BLUE.—This is a new and useful invention by M. Binko, which will supersede the well known blue bag of the laundry. A piece of paper blue being put into water colors it rapidly to the required rinse tint. Thus the trouble of keeping a blue-bag from one wash to another will be avoided, as well as some expense saved.

A TEST FOR COLORS.—M. Nickles has found that fluoride of potassium will discharge a Prussian blue color, and not affect the indigo and aniline colors. This information will interest calico printers and dyers. A fact of more general interest is, that fluoride of potassium will remove ink stains from cloth.

### GOOD GLUE AND MUCILAGE.

The best quality of mucilage in the market is made by dissolving clear glue in equal volumes of water and strong vinegar, and adding one fourth of an equal volume of alcohol, and a small quantity of a solution of alum in water.

The action of the vinegar is due to the acetic acid which it contains. This prevents the glue from gelatinizing by cooling; but the same result may be accomplished by adding a similar quantity of nitric acid. Some of the preparations offered for sale are merely boiled starch or flour, mixed with nitric acid to prevent them from gelatinizing. Gum tragacanth possesses very great adhesive properties, and is sometimes used in hair-dressing, for the purpose of stiffening the hair. A preparation for the hair, known as Bandoline, is nothing but a solution of gum tragacanth. Gum-arabic dissolved in water will not gelatinize from the influence of cold alone; but in order to prevent its decomposition or fermentation, acetic acid and alcohol are added. The high price of this gum prevents its being extensively used in the preparation of mucilage; in fact this article seldom contains any gum arabic whatever. All these preparations, including the renowned Spaulding's composition, are far inferior in their sticking properties to the ordinary solution of glue in hot water, universally used by cabinet-makers, and carpenters.

This preparation is not quite so convenient for general use, as it must be applied hot, and the articles glued must be tied or pressed together for some time; but the satisfaction of doing a better job ought to repay the extra trouble.—*Manufacturer and Builder*.

EVERY MAN HIS OWN MEASURE MAKER.—The following rules, which every one who can saw and nail boards can make his own measures, we find in an Eastern paper:—

A barrel contains 10,752 cubic inches. A box 24 inches long by 16 inches wide, and 28 inches deep—that is on the inside—will hold just a barrel.

A half-barrel.—Make a box for this 24 inches by 16, and 14 inches deep. This will contain 5,376 cubic inches, or just half a barrel.

A bushel.—This has 2150 4-10 cubic inches. A bushel box will be 16 inches by 16 8-10 inches square, and 8 inches deep.

*A half-bushel.*—A box twelve inches long by 11 2-10 inches wide and 8 inches deep, will hold half a bushel.

*Peck.*—A box 8 inches by 8 4-10 inches square, and 8 inches deep, is a peck.

*Half-peck.*—Is 8 by 8 inches square, and 4 2-10 inches deep, or 268 8-10 cubic inches.

*Half-gallon.*—This contains 134 4-10 cubic inches. A box 7 by 4 inches and 4 8-10 inches deep has just that quantity.

*Quart.*—4 by 4 inches square, and 4 2-10 inches deep.

**HOW TO BORE HOLES IN GLASS.**—Any hard steel tool will cut glass with great facility when kept freely wet with camphor dissolved in turpentine. A hole bored may be readily enlarged by a round file. The ragged edges of glass vessels may also be thus easily smoothed by a flat file. Flat window glass can readily be saved by a watch spring saw by aid of this solution. In short, the most brittle glass can be wrought almost as easily as brass by the use of cutting tools kept constantly moist with camphorized oil of turpentine.

**TO FIND THE AREA OF A CIRCLE.**—Three-quarters of the square of the diameter will give the area. Suppose the diameter of a circle is 6 feet. Multiply 6 by 6—36, three-fourths of which is 27, the number of square feet contained in the circle. When greater accuracy is required, multiply the square of the diameter by the decimal .785.

**PASTE THAT WILL KEEP A YEAR.**—Dissolve a teaspoonful of alum in a quart of warm water. When cold stir in flour to give it the consistency of thick cream, being particular to beat up all the lumps: stir in as much powdered rosin as will lie on a dime, and throw in a half dozen cloves, to give a pleasant odor. Have on the fire a teacup of boiling water; pour the flour mixture into it, stirring well all the time. In a few minutes it will be of the consistency of mush. Pour it into an earthen or china vessel; let it cool: lay a cover on and put it into a cool place. When needed for use, take out a portion and soften it with warm water.

**PROTECTING ROOFS FROM FIRE.**—The *Fireman's Journal*, which ought to be good authority on such matters, says: A wash composed of lime, salt and fine sand, or wood ashes, put on in the ordinary way of white-wash, is said to render the roof fifty fold more safe against taking fire from falling einders or otherwise in case of fire in the vicinity. It pays the expense a hundredfold in its preserving influence against the effect of the weather; the older and more weather-beaten the shingles, the more benefit derived. Such shingles are generally more or less warped, rough and cracked. The application of wash, by wetting the upper surface, restores them to their original or first form, thereby closing the spaces between the shingles; and the lime and sand, by filling up the cracks, prevents it warping.

**SPLIT ROLLS.**—One egg well beaten; one table-spoonful of sugar; one yeast cake dissolved in a cup of warm milk; two teaspoons salt; flour enough to make a stiff batter; set to rise; when risen work in a large spoonful of butter and flour enough to roll; roll out an inch thick; spread over with butter or lard; fold in half; cut with biscuit cutter; let rise and bake.

## TO KEEP MILK SWEET.

A correspondent of the *Southern Farmer* says:—A teaspoonful of fine salt or horse-radish in a pan of milk will keep it sweet for several days. Milk can be kept a year or more as sweet as when taken from the cow by the following method; Procure bottles, which must be perfectly clean, sweet and dry; draw the milk from the cow into the bottles, and as they are filled, immediately cork them well and fasten the cork with pack-thread or wire. Then spread a little straw in the bottom of a boiler, on which place the bottle, with straw between them, until the boiler contains a sufficient quantity. Fill it up with cold water, and as soon as it begins to boil draw the fire and let the whole gradually cool. When quite cold, take out the bottles and pack them in saw-dust in hampers, and stow them away in the coolest part of the house.

**TEA AND MILK.**—The Chinese have always despised European tea drinkers for disguising the fragrance of the sacred herb by the admixture of milk, and the Celestial nation would appear to have reason on their side for, it is asserted, that on mixture the albumen of the milk unites with the tannin of the tea, and forms minute flakes of that material which is, or ought to be, the main constituent of a pair of boots. There may be nothing like leather, but a leather lining to one's stomach is hardly a specimen of the eternal fitness of things. When we, ourselves, so vitiate the cheering cup, we can hardly wonder that the "Heathen Chinese" considers the leavings of his own decoctions quite good enough for us, and we can have no reason to complain of shipments of re-fired leaves, but it is another matter when the process goes a step further, and takes the form of "Maloo mixture," a delicate euphuism for willow leaves and maggots, iron filings and plumbago.—*London Milk Journal.*

**TOMATO BEER.**—A Georgia correspondent of the *Southern Planter* tells how to make tomato beer. He says:—"Gather the fruit once a week, stem, wash and mash it; strain through a coarse linen bag, and to every gallon of the juice add a pound of good moist brown sugar. Let it stand nine days, and then pour it off from the pulp, which will settle in the bottom of the jar. Bottle it closely, and the longer you keep it the better it is when you want it. Take a pitcher that will hold as much as you want to use—for my family I use a gallon pitcher—fill it nearly full of fresh sweetened water, add some of the preparation already described, and a few drops of essence of lemon, and you will find it equal to the best lemonade, costing almost nothing. To every gallon of sweetened water I add a half a tumbler of beer."

**TO KEEP GREEN CORN.**—Mrs. W., Upper Alton, Ill., writes the *Country Gentleman*:—"My plan is this, and it never fails. Gather the corn when in good eating state. Place the corn, cob and all, in a vessel and pour boiling water over it. Let it remain in hot water three to five minutes. Then cut the corn from the cob, put a layer of corn, then a layer of salt, in large stone jars; when full weight down. Keep adding layer of corn and salt as the corn sinks in the jars. The salt makes a brine without water. When wanted for use soak in clear cold water.



**DRYING AND COOKING GREEN CORN.**—Putting up corn in salt, and then soaking it to get the salt out, in my opinion draws all the sweetness from it. My way is to take the corn when in the right stage, neither too young nor too old, have on the fire a large pot of boiling water, clean the corn of silk, drop it in the pot and parboil till half done; take up, let it drain and cool, then cut, not too close to the cob, but scrape the cob after it is cut, spread on a sheet and dry in the sun. Dry as quick as possible to prevent souring. Let it get thoroughly dry before putting away; put in a thin cotton sack and hang in a cool, dry place. Sun occasionally to keep it from getting musty. To cook it take as much as you require, winnow it to get the chaff out, wash through one water, and put in soak in just enough water to cover it, you may put it in soak as early after breakfast as you like; about two hours before dinner, put it on in warm (not hot) water, and boil gently, but steadily, for an hour and a-half, or until the corn is tender, and the water nearly all boiled away. Then add a cup of rich milk, a good lump of butter, and salt and pepper to taste, and let it stew in this another half hour so as to have just a good gravy to it when done. When you put it on to boil, turn in the water in which it has soaked. I allow a quart of water to a cup of corn, and let it boil away till nearly dry; but if boiled too fast it will boil away before the corn is done. Stir once in a while and mind it does not burn after the milk is put in. I hope some of your readers will try my way, for every one tells me I cook it better than any they ever tasted. Be sure and not have the liquor too thin, and have it rightly seasoned. If there is too much water remaining after it is tender pour some off before you add the milk, but it is better to reduce it by boiling so as to retain the flavor of the corn as much as possible.—*Moore's Rural New Yorker.*

**TO STEAM A TURKEY.**—Rub pepper and salt inside the turkey, after it has been well dressed and washed; then fill the body with oysters; sew it up carefully; lay the turkey in a large dish, and set it into a steamer, placed over boiling water; cover closely, and steam from two hour to two hours and a half—or till by running a fork into the breast you find it is well done. Then take it up; strain the gravy which will be found in the dish; have an oyster sauce ready, prepared like stewed oysters, and pour this gravy, thickened with a little butter and flour, into the oyster-sauce; let it just boil up, and whiten with a little boiled cream; pour this sauce over the steamed turkey, and send to the table hot. Of course, while the turkey is steaming, you will have the oysters all ready for the gravy from the dish, and the cream also boiled, that there may be as little delay as possible after the turkey is cooked.

**CURING ONIONS.**—After the tops of onions are dried down, and are ripe, then the sooner they are gathered and marketed the better. As they do not all ripen at once, it is well to pull, clean, and cure them by piece-meal, rushing them into market as fast as ready, as some will rot, and if left in the ground after fall rains, are apt to take on a second growth. If onions are pulled by men a potato hook is about as good as anything to loosen them from the ground but the better way is to hire boys to loosen them by hand; then they are in no danger of being bruised or punctured by the instrument.

**QUEEN PUDDING.**—Pour over a pint of biscuit or light bread crumbs, enough milk to make a good batter not too stiff; let it soak a while, then mash smooth and add one cup of sugar, one half pound butter and the yoke of four eggs well beaten; flour with anything you like, and bake. Froth the whites with a cup of white sugar, when the pudding is done spread them over and return to the stove and brown lightly. Eat with or without sauce. Very nice.

**GREEN TOMATOES FOR PIES.**—Slice green tomatoes and stew with half their weight in sugar, and whole spice or cloves enough to flavor well; no water is required as they yield juice enough of their own. Line the pie pan with puff paste, fill with the tomatoes as you would apples; add a few small bits of butter to each pie; cover with a top crust and bake. They are delicious. They may be put up in this way for winter use. They keep well when done.—V. A. T.

## Poetry.

### AN ENGLISH HOME.

A tranquil English home, grown old and grey;  
Embowered and shadowed by ancestral trees,  
Where leafy summer branches stir and sway  
With every scented breeze.

Dark cedars piled with foliage thick as moss,  
Keep a green twilight through the sultry hours;  
And showers of white rose petals drift across  
Bright beds of scarlet flowers.

And clear bird music tremulously sweet,  
Rings through the bosky shades from early dawn  
Till eventide; while busy childish feet  
Traverse the level lawn.

And faithfully, the church bells' blessed chime  
Repeats the ancient message soft and blest,  
Saying, "Look upward to a fairer clime,  
For this is not your rest."

Yet here awhile may human hearts forget  
The world's wild tumult and low sordid gain,  
Here may the chaffing spirit cease to fret  
Against its fleshy chain.

The face may wear the old, old smile of youth,  
The eye call back their child light, dewy clear;  
Aye—the grave lips may dare to speak in truth  
The soul's own language here!

The polished words that hide the inward thought—  
The smooth world-platitudes—are cast away;  
Here the free spirit, talks as Nature taught,  
With simple "yea" and "nay."

But still "look upward" chime the solemn bells;  
Look upward, even from these cloistered bowers,  
So beautiful with morning's witching spells,  
And evening's dew-soaked flowers.

Above the windy tree-tops, far above  
The fair clouds, white as ocean's drifting foam;  
Above the tremulous star-gems that ye love—  
There is the soul's true home.

Here are the Eden bowers that He hath blest,  
The earthly paradise of joys and fears;  
Here is the city of eternal rest,  
A land unstained by tears.