

ground, headed down very near the root, cleft grafted with a single scion, sloping off with an oblique cut in the side of the stock opposite that where the graft is placed, and then planted at once in the rows, so as to allow only a couple of buds of the scion to appear above ground. It is not usual with many other to tie or clay the grafts in this case, as the wound is placed below the surface, but when this plan is adopted, the grafts must be set and the trees planted at once, drawing the well pulverised soil with great care round the graft. Another way of grafting apple stocks, common in some western nurseries, consists in tongue-grafting on seedling stocks of very small size, cut back almost to the root. This is performed in winter, by the fire-side—the grafts carefully tied, and the roots placed in the cellar, in sand, till spring, when they are planted, the top of the graft just above ground.

*Saddle grafting* consists in cutting the top of the stock in the form of a wedge, splitting the scion and thinning away each half to a tongue shape, placing it astride the stock, and fitting the two, at least on one side, as in tongue-grafting. This mode offers the largest surface for the junction of the scion and stock, and the union is very perfect. Mr. Knight, who practised it chiefly upon Cherry trees, states that he has rarely ever seen a graft fail, even when the wood has been so succulent and immature as to preclude every hope of success by any other mode.

A variety of this mode, for stocks larger than the scions, is practiced with much success in England after the usual season is past, and when the bark of the stock separates readily. "The scion, which must be smaller than the stock, is split up between two or three inches from its lower end, so as to have one side stronger than the other. This strong side is then properly prepared and introduced between the bark and the wood; while the thinner division is fitted to the opposite side of the stock." The graft, thus placed, receives a large supply of the sustaining fluid from the stock, and the union is rapid; while the wound on the stock is speedily covered by a new layer of bark from that part of the scion which stands astride it.

*Grafting clay* is prepared by mixing one-third horse-dung, free from straw, and two-thirds clay, or clayey loam, with a little lime, like that used in plaster, to prevent its cracking. Beat and temper it for two or three days, until it is thoroughly incorporated. When used, it should be of such a consistency as to be easily put on and shaped with the hands.

*Grafting wax* of excellent quality we have made by melting together three parts of bees-wax, three parts of rosin, and two parts of tallow. While yet warm it may be worked with the aid of a little water, like shoemaker's wax, by the hand. The common grafting wax of the French gradeners is of two kinds. The first is melted and laid on with a brush in a fluid state, and is made of half a pound of pitch, half a pound of bees-wax, and a pound of cow-dung, boiled together. The second, which is spread while warm on strips of coarse cotton, or strong paper, and wrapped directly about the graft, answering at once to tie and to protect it, is composed of equal parts of bees-wax, turpentine, and resin. The grafting wax most commonly used here is made of tallow, bees-wax, and resin, in equal parts, or, as many prefer, with a little more tallow to render it pliable.

Grafting wax is a much neater and more perfect protection than grafting clay, but the trifling cost of the latter, where a great deal of work is to be done, accounts for its greater use by nurserymen, and gardeners generally.

From the Maine Farmer

#### RATIONAL REMEDY FOR CHOKED CATTLE.

Mr. Editor.—Having, in years past, before experience had taught me the better way, been a too frequent witness of the direful and truly painful results of the irrational and absurd, not to say inhuman and disgraceful means devised and employed for the expulsion, at all hazards, in double quick time, of whatever substance may have lodged in the throat of an animal, rather than with the view of affording relief, so far and as soon as it could be done, by the proper employment of rational means; and being aware that these means are too much in vogue with some, even at the present day, who are considered by many to be very skillful in such cases, and consequently their aid is frequently solicited; it was with no ordinary pleasure and gratification that I noticed the publication in the editorial department of the *Farmer*, of the 24th ult., of the most consistent and efficacious remedy of which I have any knowledge, in recent cases of choking, that is, when it is discovered that the animal is choked, before the throat becomes so swollen, and the muscles consequently so contracted as to hold it with a tyrant's grasp; and adopting the emi-

nent motto, "seek knowledge, and diffuse knowledge." I improve the present opportunity to bear testimony to the value and importance of the knowledge of this remedy to every owner of live stock; and to inform those of your readers, if any there are who may not be in possession of the facts, that in extreme cases, when the substance cannot be started from a snug quarters so readily as desired, by the employment of the judicious means which you mentioned, with others which the better judgment of the operator will suggest, after the oil or soap suds has been poured down the throat, which is sometimes the case, as I have had occasion of knowing, the much desired object may be, or has been speedily accomplished by introducing a quantity of snuff, or finely-powdered bay-berry into the nostrils, which may be done without the least trouble by means of a goose quill or a pair of bellows. This will produce a sneezing cough, which being caused by a spasmodic action of the muscles of the throat, is pretty sure to be attended with the rapid removal or ejection of the obstruction from the mouth.

I was informed sometime since by a lady, the wife of a distinguished Physician, that she once succeeded by this means, in saving the life of a valuable, and their only cow, after the Doctor and his advisers had exhausted their skill, and left her with the belief that no human aid or means could save her.

AMICUS.

Monmouth, February 4th, 1846.

### CANADA FARMER.

March 12, 1847.

#### MAPLE SUGAR.

As the season for making Sugar is at hand, it may not be amiss to offer a few hints on the subject to those who, though they may know well enough how to make Sugar, do not know how to make good Sugar. With regard to the importance of this product to the public and to individuals we need say but little. The value of the sugar imported from abroad, and entered at the Port of Toronto alone, is set down at £21,687, for one year. There is but one other article of consumption for which we pay so large an amount yearly, and that is tea; which cost us, for what we imported into this City last year £40,000! This last heavy draw upon our purses we see no way of avoiding: we have not yet found anything that we can produce which will answer as a substitute. But for the "sweet thing" we certainly "come it too strong." If the actual value or cost of the sugar annually imported into the Province could be ascertained, it would show a pretty large figure. And we must recollect, when considering the matter in a public or national point of view, that we pay the hard cash for this luxury. There is no reciprocity in the business. The amount of wheat or flour which we send to the Southern States, to Havana, or to any of the West India Islands, is, we suspect, rather small. We cannot therefore discover either the point or the meaning of the following passage in the February number of the *Cultivator* :—

"If there were no more [wheat] grown in the country than what was annually consumed by the population, the import merchants would lose an important item of export to place to their credit in the markets from whence they draw their supplies of sugar, &c."

From the following statement, if we understand it properly, we must dissent entirely :—

"As important as is the export of wheat from Canada, still that portion of this article that is really the growth of Canada would fall short, in a series of ten or fifteen years, of supplying the country with sugar."

We suppose the proposition to be substantially this; the wheat and flour which we export, during a period of ten years, will not pay for the sugar which we import during that period. Let us look at a few figures. By the Custom House returns, for the year ending 5th January, 1847, it appears that there have been shipped from the Port of this City 194,856 barrels of flour, and 108,116 bushels of wheat in one year. Estimating the former at \$4 per barrel, and the

latter at \$1 per bushel (which is near enough the truth for our calculation), we have £221,885 as the value, at this port, of the wheat and flour shipped from it during one year. Now, so far as we are able to judge, we should say that the space of country from which wheat and flour is sent to this place is about of the same extent as that to which supplies of sugar, &c., are sent from it. The relative proportions between the two articles at Toronto will, therefore, afford a proper comparison for the Province. And what do we find. Why, that the value of the sugars imported during the same period, and at the same port from which the above £221,885 worth of wheat and flour was exported, is set down at £21,687 17s. 11d., leaving us a balance of over £200,000 for our wheat, &c., after we have paid for the sugar! But it may be that the Editor means to speak of the profit only which we derive, after deducting the cost of production. Let us suppose, then, that it costs one-half for seed, labour, interest on the value of land, barrels, &c. &c., and \$2 a barrel, and half a dollar a bushel, is the profit which the farmer may safely put into his pocket, and call his own. We still have £110,942, out of which to pay the £21,667 for sugar.

Though we must, for these obvious reasons, differ from our cotemporary in his wholesale conclusions, drawn from premises so unsound, or rather from no premises at all, yet we agree with him in the opinion, that sugar may be made from the maple, sugar-beet, and corn-stalks, in sufficient quantity to supply our home consumption. That it is good policy to produce at home as many of the articles of home consumption as we can, provided that we do not spend more time and incur more expense than if applied to some other object, would enable us to purchase from others, will not, we think, be denied. But if a farmer who has five hundred or a thousand maple trees is obliged to pay his hired labourers \$10 per month each, and board them besides, and if his fences should require his attention, or any part of his farm be in need of repair and improvement, which must be neglected on account of operations in the sugar-bush, then we say it becomes a question whether it would not be the wisest policy to let his trees alone, and buy his sugar; otherwise it might turn out that he had "paid too dear for his whistle." It so happens, however, that the time for making sugar from the maple occurs just at that season of the year when the farmer who keeps everything in proper order about him has little else to do: he may therefore engage in this business with profit to himself and advantage to the country. The production of sugar from the beet and from corn-stalks must, we apprehend, be entered into as a business of itself, and not as a part of every farmer's work. It would be well if Government were to appropriate a sufficient amount, to be expended through the Provincial Agricultural Association, for the purpose of fully testing the feasibility of making sugar on a large scale from the products of Canadian soil. Encouragement held out even by the local Societies might lead to important results. The amount of money annually sent out of the country for sugar, though not so great as some would have us believe, had much better be retained.

With regard to the manufacture of maple sugar, which is carried on to some extent by nearly all who have the trees, it is apparent to every one who knows anything of the matter, that it is capable of considerable extension and great improvement. Such speculations as the following, however, are beyond our depth, and we shall therefore religiously abstain from them:—"With proper management, ten millions of maple trees might be tapped annually for fifty years to come in Western Canada, which, at an average of two and a half pounds per tree, would give a return of twenty-five millions of pounds weight of sugar, which, at the rate of £2 per 100 lbs., would be worth a half of mil-

lion of pounds currency." Whether we "might" tap ten millions or twenty millions, for one year or fifty years, is, we venture to say, a question of no importance: it is absurd to raise it, because we have no data by which we can settle it. The practical view of the subject is this: should not every farmer who has a sugar-bush endeavour to preserve it, and adopt the best means to make it productive. If he does this, will he not make sugar enough for his own use, and, if his bush be a good one, will he not have some to spare? Then, passing from the individual to the public, could we not manufacture sugar enough from other substances, the growth of our own soil, to supply the deficiency? If we can manufacture enough for this purpose, can we do it cheaper than we can import it? These, it appears to us, are the questions to settle, and which may be settled.

When we began this article, we intended merely to give a few practical directions for making maple sugar, but, taking up the remarks of our brother of the *Cultivator*, upon the same subject, we were led on a little further. We now return to that part of the subject. The art of making good sugar consists in freeing it from all impurities. It is asserted, that with the same care the juice of the maple will make as good sugar, and as white, as the juice of the cane. One-third may be added to the market value of maple sugar by the simple process we are about to detail, and which will cost but a trifle to adopt. It is the same process by which Havana sugars, and, indeed, by which, or by a modification of which, all sugars of a good quality are made. We take it from Chaptal, a French writer of distinction, who manufactured sugar from the beet. He thus describes the process he successfully pursued :—

We will first give the process of purifying the juice and the syrup. The juice (of the beet) is first heated to a temperature of one hundred and eighty degrees—thirty-two degrees below the boiling point, when some milk of lime, prepared by throwing some warm water upon lime, is thrown in, and the liquor well stirred. As soon as the first bubble makes its appearance, the fire is extinguished, and the liquor left at rest. A scum rises, thickens, dries, and hardens. The liquor becomes clear. The lime unites with the mucilage, and settles to the bottom. The scum is removed, and the clear liquor drawn off. The process requires an hour, and sometimes much more. The syrup is afterwards refined by animal charcoal [bones charred, or burned by heat: it may be made by placing bones in an open iron vessel, and heating until they are sufficiently black. Probably the whites of eggs, or milk, would answer the purpose, in purifying maple syrup.—Ed. C. F.] and the whites of eggs, and filtered through a coarse, thick, rough cloth. Moulds of tin or other material are prepared, of any size, of a conical shape, like the form of a sugar-loaf, with a stopper in the small or lower end. When sufficiently reduced (which is not so much as is usually done in the common way of "sugaring off."—Ed. C. F.), the syrup is turned into them; as soon as granulation has begun on the surface and sides, the crust is broken with a spatula [a thin, knife-like instrument; but a small piece of wood, like a pushing-stick, will of course do as well.—Ed. C. F.], and the whole stirred well; after which it is let alone. After this, the process of whitening or clarifying is thus managed:—The clay is first thoroughly washed, till it acquires such a degree of consistency as not to flow when placed upon a smooth and slightly-inclined board. It is then thrown upon the sugar in the moulds. The moisture penetrates the loaves, deprives the sugar of its colour, and passes out at the point of the mould, which should now be unstopped. The lay, deprived of its water, shrinks and dries, and is removed. A second, and sometimes a third application of clay is made, before the sugar attains the desired whiteness.

#### WASH FOR FRUIT TREES.

We have seen, that in several parts of the country the practice of whitewashing trees has been adopted, and we have often, in our own minds, questioned its propriety. If there be such a thing as "insensible perspiration" in the body of a tree, as there is in the human body, anything that obstructs it