fine-toothed cultivator, a horse and a skilful hand will go over an ordinary garden in an hour, and by following this up about once a week, supplementing this tillage with a little hand-work with hoe or garden rake, you will till such a garden quickly and thoroughly, and it will be such a piece of work that the farmer will take pride in.

As to having shade or fruit trees to cumber the vegetable garden, I consider them so out of place there as not to need mentioning in connection with the garden ; but I remember when the formidable rows of plum and cherry trees, with their thickets of volunteer scions and the invincible rows of currant bushes, were an accompaniment to almost every farmer's garden. As they are still used to quite an extent in the Province, I see that the practice should be noticed. I provide for all these, and for all berry bushes, in my orchard system, that is, just to plant the rows far apart one way (the way I want to plow) and much nearer the other; then on the side, or end nearest the house, plant all pear, plum, cherry trees and the like, either as an extension of the apple rows, or in different corresponding rows, or into the apple rows, one in each interval, until enough are in this way planted out. Then I extend the filling in of these rows, sometimes even to the extent of the whole orchard, with currant and berry bushes planted between the trees on the line of each row. I also go still further than this, and plant an American white cedar or arbor vitæ, say 3 or 4 ft. in height, along every row of apple, and half way from one tree to another along the row. These always branching low, will break the current of wind under the apple trees and make the orchard much warmer. I also plant trees for wind-breaks outside of these. Now as an orchard, especially in its earlier years, should be tilled and planted, and as this tillage will all be one way (not cross ways), it is just as easy to work with these apple rows thus filled out as if there was nothing there but the orchard, and what shade there is will be no detriment to this small fruit; it is almost entirely out of the way, and will cost but little to grow it.

As to the strawberry grounds, it is not half the time of late years that I grow them, since I can buy so cheaply. But when I plant, it is done across the head or farther end of the garden, and I plant berry bushes there too, when planting in plots alone, these also to be tilled with a horse the first year, and then heavily mulched with coarse manure or old hay and straw. This does not interfere with the other system of garden work with the horse and rotation, as stated.

As to getting an extra early start with tomato, cabbage, pepper and such plants, the green-house men make such a business of supplying farmers with these, that they are mostly obtained of them. But it is also very desirable, and quite as practicable, to get potatoes and corn earlier than they will grow from hill planting. For them I make a very plain hotbed to start the plants, and can usually also grow those other plants too in the same bed. For this I draw 2 or 3 loads of horse manure, dump and stamp it down about two feet thick, in any out-of-the way corner, with 6 or 8 inches of good soil; and after cutting some early kind of potato, spread the pieces one thickness on the bed as far as they go, then cover these about 3 to 4 inches with more earth. The corn should be put into 3 to 4-inch check rows, and other plants by themselves. Then when potatoes are 2 to 4 inches high, plant in these sprouted pieces, earth, roots and all, one to a hill. With the corn, cut out each square for a hill, and by taking a little pains, these can be got much earlier than by common planting.

Conquering Pear Blight.

A correspondent of the "Horticultural Times" (Eng.) says : The tree was badly blighted, the top boughs being dead down at least four feet, and every limb of the tree seeming more or less affected. The land was rich with barn-yard manure, but I concluded it wanted mineral food, so I dug away the soil for about 6 feet around the tree and down until the top roots were all uncovered, and then took 100 lbs. of German salts (containing 15 lbs. of pure potash), mixed it with four or five times its weight in earth, and spread on top of the mixture with potash salts. Then I took 50 lbs. of lime mixed with earth, and spread it on top of the potash and phosphate (these contain all the above minerals.) We then drew from the well twenty or thirty pails of water, and gave the whole a thorough wetting, and in one week's time I could see that the tree was reviving, and blight apparently never extended an inch beyond what it was at the time of making the experiment. The tree bore a small crop of pears in the centre of the top that summer, but at the extremities of the limbs they fell off. The next year it bore a large, fine crop of pears. None fell off, and no insects seemed to touch them. The third year was the same, the crop large, fine and smooth ; and this, the fourth year, the crop promises as good as the two previous years. Now this proves that what we call "pear blight," is simply starvation ; that the mineral supplies of the soil had become exhausted and the tree was dying for want of food. And it proves a little more, for what had been a semi-annual bearer became an annual bearer.

To Make Grafting Wax.

There are various proportions of the materials used to form grafting wax. Some want a wax that will not run in a hot sun, some a wax that will spread easily, and for some purposes we need a tough, sticking wax. The materials used are tallow, resin, and beeswax. Some use pure linseed oil in place of the tallow. The tallow and resin make the wax adhesive. The beeswax makes it smooth and keeps it from melting in the hot sun. The more resin used the cheaper the wax, and the more brittle in cold weather and more difficult to spread. Beeswax makes it spread and keeps it from sticking to the hands so tenaciously ; it also makes it work smoother, but adds to the cost of the wax.

The finest and most expensive grafting wax is made of equal parts of tallow, resin, and beeswax ; this is very expensive. A fair wax may be made of four parts of resin, two of tallow, and one of beeswax. A good wax, and one that will stand hot weather, is made of—resin, four parts ; beeswax, two parts ; tallow, one part. So much depends upon the uses the wax is to be applied to, and the quality of the materials used, that the wax can be varied in materials from best wax, given first, to the poorest, which was the second mentioned.

An excellent and easy way to make grafting wax is to take one pint of pure linseed oil, one pound of beeswax, and four pounds of resin. We find the best way to mix the materials, for any of the recipes we have given, is to take an iron pot and set it on a fire, and place in it the resin and beeswax ; melt them together, then carefully add the tallow or linseed oil, making sure it does not boil over and take fire. When all the tallow or oil is added, stir the hot wax well and remove from the fire. Pour it into cold water. When cold enough to handle, work it by pulling, until it is a fine lemon color. It is then ready for use.—[Farm and Garden.

SECOND PRIZE ESSAY.

Personal Observations on the Effects of the Removal of our Forests.

BY W. A. HALE, SHERBROOKE, QUE.

Before treating upon the effects of the removal of our forests, it may be as well, first, to say a few words concerning the causes of their too rapid disappearance. These in most cases I think we can trace to the avariciousness of those engaged in the lumbering business, encouraged no doubt by the ruinous policy pursued by our local governments, each one of which seems to be more intent upon showing a good financial balance sheet at the end of their terms of office than by husbanding what might otherwise be lasting resources of the country. The reckless manner in which they sell enormous limits of timber at prices which tend to encourage over-speculation and supply, also has the effect of inducing lumber men to hastily cull out only the best portions of the best trees, and to leave the rest not always to grow, but generally to fall victims to the enormous forest fires which are almost certain to follow in the wake of the lumberers. Added to this are the unfair rules for scaling logs, particularly long timber, the effect of which is to cause the sub-contractors in many cases to reject large portions of the upper parts of trees which might otherwise be brought to the mills, and which thus remain as being worse than wasted, only adding fuel to the flames when fires do occur.

As to the disappearing of the forests under the axe of the settler and wood contractor, we need not feel so much alarm ; the former, I am aware, is far too prone to make a clean sweep of everything in the shape of tree or bush, with which he comes in contact while clearing up his few acres of new land each year, but then he seldom allows the fires to spread to his standing timber, and with him much can and is being done by forestry associations and municipalities in inducing him to allow trees to remain along the high roads, boundaries and in rocky and swampy places, as well as groves and groups of trees in pastures. The wood contractor takes little else than hard wood, and either clears up as he goes, or lets the saplings grow for a future cutting, and his depredations have been very materially reduced of late years by the cheaper rates of and more general use of coal.

The effects of the removal of our forests seem, no doubt, to be in general detrimental to the rest of the country in many ways. Taking the forests as they now stand, it is true that they are not contributing directly to the wants of man, as are the cleared and cultivated portions of the land, and it is also true that there is no more available timber standing in them to-day than there probably were thousands of years ago. Then why, one might naturally ask, should we not hew them down, convert them into money and materials for the benefit of man, and give their place to the growing of crops beneficial to the human race ? This all sounds logical enough, but are we prepared to convert our still cold winter climate (of which most parts of Canada can now boast) into a shelterless, blizzard-blown country like the treeless west ? For just in pro-